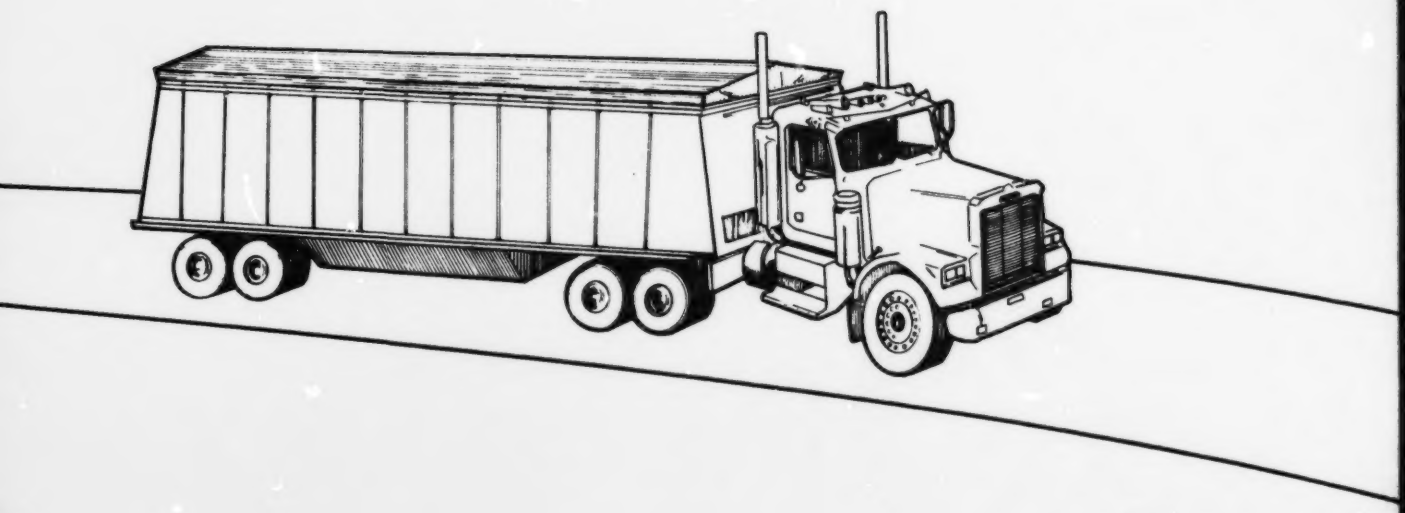
IMPACT OF REFORMS TO THE STATUTORY RATES ON TRUCKING



Alberta
AGRICULTURE
Production and Resource
Economics Branch

AGDEX No. 843-5

87-00980/

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IMPACT OF REFORMS TO THE STATUTORY RATES ON TRUCKING

by

G. Nabi Chaudhary

Alberta Agriculture
Production and Resource
Economics Branch
AGDEX No. 843-5
September, 1986

FOREWORD

In most of the discussions surrounding the reform of the statutory rates and the grain transportation system, commercial trucking of grain seemed to have been largely overlooked. By paying the Crow benefit to the railways, commercial truckers feel that they have been prevented from playing a more meaningful role in the movement of grain. Phase I of this study examined the role of commercial and farm trucks in the grain industry. This report, Phase II, examines the future role of commercial trucks for hauling grain/grain products under different methods of paying the Crow benefit.

This report found that the major factors contributing to the decreased role of commercial trucking in grain transportation were the addition of specialty crops to the Statutory rates list and the method of Crow benefit payment. The report did not see a significant role for trucks in moving grain/grain products to export positions. But with appropriate changes in the Western Grain Transportation Act, the trucking industry can look to a strong role in improving the overall efficiency of the grain handling and transportation system.

Dr. Carlyle Ross,
Branch Head
Production & Resource
Economics

ACKNOWLEDGEMENTS

The author wishes to express his sincere thanks to Messrs Gordon Halls, Executive Director, Urban Planning, Alberta Transportation, and Glen Johnston, Director, Alberta Physical Distribution Program, Economic Development and Trade (members of the study management committee) for guidance, cooperation and assistance during the course of this study.

Comments by Dr. Carlyle Ross, Branch Head, Production and Resource Economics Branch, and Mr. C. D. Radke, Assistant Deputy Minister, Planning, Economics and Administration, on the preliminary drafts of the study are gratefully acknowledged.

TABLE OF CONTENTS

		PAGE
	Foreword	i
	Acknowledgements	ii
	List of Tables	v
	List of Figures	v
I	**INTRODUCTION**	1
	Objectives of this Study (Phase II)	2
	Source of Data	2
II	**DEVELOPMENT AND CHANGES IN THE GRAIN HANDLING AND TRANSPORTATION SYSTEM**	3
	Consultation Process	3
	Western Grain Transportation Act (WGTA)	4
	Appointment of the Committee of Inquiry on Crow Benefit Payment	4
	Recommendations of the Committee of Inquiry on Crow Benefit Payment	5
	Review of the Western Grain Transportation Act (WGTA) and the Method of Crow Benefit Payment	6
III	**DEVELOPMENT OF TRUCKING IN THE GRAIN INDUSTRY**	9
	Intra-provincial Grain Trucking	9
	Inter-provincial Grain Trucking	10
	Configuration of the Commercial Truck Fleet for Hauling Grain	14
	Changes in the Farm Truck Fleet	14
IV	**IMPACT OF CROW BENEFIT PAYMENT ON TRUCKING**	17
	Trucking Industry Concerns	17
	Pay the Railways	17
	Pay the Producers	19
	Impact of Increased Trucking on Rural Communities	26
	Resource Neutrality	28
	Grain Handling and Transportation System Efficiency Measures	29
	Federal Government Efficiency Measures	29
	Railway Efficiency Measures	29
	Grain Handling Efficiency Measures	31
	Producer Efficiency Measures	32

TABLE OF CONTENTS (continued)

		PAGE
	Road Effects of Changes in the Rail System	33
	Trucking as an Option to Branch Lines	34
V	**PROSPECTS FOR COMMERCIAL TRUCKING TO TRANSPORT GRAIN TO PORT TERMINALS**	39
	Use of Truck Versus Train for Hauling Grain to Ports	39
	Carrying capacity	39
	Cost effectiveness	39
	Port facilities	41
VI	**SUMMARY**	43
	Changes in the Grain Handling and Transportation System	43
	Impact of Crow Benefit Payment on Trucking	44
	Trucking of Grain to Port Terminals	45
	Bibliography	47

LIST OF TABLES

TABLE		PAGE
1	Licensed Primary Elevators and Delivery Points in Alberta, 1974-75 to 1983-84	9
2	Effect on Roads of Moving 7,500 Tonnes of Grain With Various Truck Types	21
3	Intra-provincial Commercial Truck Transportation Rates on Grain and Grain Products	23
4	Costs for Hauling Grain by Farm and Commercial Trucks	23
5	Population, Operators, Farms and Areas by Census Year, Alberta	27
6	Annual Cost of Moving Grain Originating on "example" Branch Line	36
7	Comparison of "Status Quo" to Four Alternate Scenarios	37
8	Comparison of Various Alternatives to the Least Cost Scenario (total abandonment)	38
9	Comparison of Statutory Rail Rates and Truck Rates on Grain to Vancouver	40

LIST OF FIGURES

FIGURE		PAGE
1	Producer Grain Deliveries to Various Market Outlets	11
2	Flow of Grain by Mode of Transport	12
3	Rail and Truck Rates on FFA Grains	13
4	Percentage Movement of FFA Grains to British Columbia from Prairies	15
5	An Alternate System for Handling Grain	42

SECTION I

INTRODUCTION

The Canadian railroad system has served as a universal carrier to the Canadian economy for many years. The Prairie farmer still finds that railroad service is essential in moving grain for export to the ocean terminals. However, with branch line abandonment and with large capacity trucks available for grain hauling, short hauls to high throughput elevators have been initiated in order to maintain and improve the transportation service to the grain farmer.

The present grain transportation (system) network on the prairies developed during the late nineteenth century and the early twentieth century as a result of expansion of the railway branch line network. The railway was the most common mode of grain transportation throughout the prairie provinces until the late sixties. Over the last several years, the rising costs of branch line operations have forced the railways to consider abandonments. The result has been the abandonment of several branch lines. Abandonment and the threat of abandonment also resulted in closure and consolidation of primary elevators and improvement in the road network. Moreover, the availability of heavier trucks led to an increased demand for the services of the trucking industry. During the last two decades, demand for motor carriers has grown substantially relative to the demand for railroad service, especially on short and medium hauls. Nowhere has this trend been more obvious than in the movement of agricultural commodities. Both commercial and farm trucks are now playing an important role in transporting agricultural products from production areas to consumption centres.

This study is an extension of an earlier report published in 1985, which described the present trucking activity for the transportation of grain and grain products in Alberta, and from Alberta to British Columbia for domestic use. The report also discussed the future role of trucking in Alberta in view of the closure and consolidation of primary elevator facilities and the use of trucks for transporting grain.[1]

The passage of the Western Grain Transportation Act (WGTA) to reform the Statutory (Crow's Nest) rates could have made custom/commercial trucking more attractive in hauling grain from the farm to main line rail shipping points. Under the Act, the Crow benefit is paid to the railways. This method of payment does not give farmers the opportunity to evaluate alternatives for transporting grain at least cost. However, this study attempts to assess the impact of reforms in the Statutory rates on trucking of grain, both under pay-the-railway and pay-the-producer proposals. In the late eighties, trucking grain over longer distances to more central locations could become a reality if the Statutory rates increase four or five fold, together with the primary elevation and storage charges . With the continuing consolidation of the grain handling and transportation system, trucking will have an important role to play.

---

1 Chaudhary, G. Nabi, "Trucking In the Changing Grain Industry (Phase I)", Economic Services Division, Alberta Agriculture, Agdex No. 843-3, 1985.

Objectives of this Study (Phase II)

This study examines the development and changes in the grain handling and transportation system. It discusses the impact of the existing method of payment on the farmers' choice of transporting grain from farm to primary elevator points and other grain collection facilities, and the future role of trucking under the new regime of Statutory rates. Following are the specific objectives of this study:

1. To determine the future role of trucking for grain transportation under the two scenarios:
   - pay the railways
   - pay the producers
2. To determine the future role and prospects of commercial trucking to transport grain to export positions under the new statutory rates.

With regard to objective number two (2), it was realized that it may not be feasible now for trucking to replace rail for long hauls, but that trucking may serve as a "feeder" to expedite rail traffic and the efficient use of railway equipment.

Source of Data

Most of the data for this study were generated in-house and from primary and secondary sources. As a joint study between the Departments of Agriculture, Economic Development and Transportation, consultation was undertaken to develop a framework for this study.

Several studies completed by various commissions, task forces, committees, federal and provincial government agencies, and consultants, were reviewed to obtain related information for this report. To obtain the benefit of their experience with changes in the grain handling and transportation system, most of the commercial carriers licensed to haul grain and grain products intra- and inter-provincially were contacted. They were also asked to provide information on commercial trucking fleet characteristics and any concerns that they have about the reforms in the Statutory rates.

Data on farm truck characteristics were obtained from the Solicitor General's Department, Motor Vehicle Branch. Farm trucking costs were taken from a recent joint study undertaken by Alberta Agriculture and Alberta Wheat Pool. Commercial truck rates on grain and grain products were obtained from tariffs published by the Western Tariff Association in Calgary. Selected rail rates were taken from published railway tariffs.

Preliminary discussions were also held with private consultants and senior officials of the federal and provincial governments to obtain feedback on the terms of reference.

SECTION II

DEVELOPMENT AND CHANGES IN THE GRAIN HANDLING AND TRANSPORTATION SYSTEM

The grain handling and transportation system on the prairies developed rapidly during the thirties. The railways built extensive branch lines to serve the expanded network of primary elevators. The grain companies built a large number of elevators along these branch lines to attract grain business. The primary means of moving grain from the farm to primary elevators at that time was by horse and wagon.

With the development of trucking, grain producers abandoned the horse and wagon for delivering grain to various market outlets. At the same time, grain companies started closing unprofitable primary elevators during the forties and fifties, thereby accelerating the rationalization process. Branch line abandonment also resulted in the closure of some primary elevators as the railways could not provide service for branch lines which were uneconomical to operate.

In the fifties, the cost of operating branch lines started to increase and the railways began complaining that the Statutory rates set in 1925 were too low. The federal government appointed commission after commission to study the grain handling and transportation problems from both the producer and railway perspectives, but failed to take any initiative to resolve the concerns until the early eighties.

In the seventies when railway subsidies increased significantly, the federal government undertook extensive consultations at all levels in regard to the Statutory rates issues. Unfortunately no compromises were found. However, the federal government has been compensating the railways for losses incurred on designated branch line operations for transporting grain.

Consultation Process

In February 1982, the federal government appointed a task force to develop in consultation with the parties affected, some consensus to resolve the issue of statutory rates. The consultation process afforded an opportunity for the parties to express their concerns regarding the future direction of the grain handling and transportation system. Although all parties participating in the consultation process did not agree on all aspects of resolving the Statutory rates issues, a general consensus was provided on a number of broad issues. Among the most significant were:[2]

- the need for additional revenue for the railways to modernize and expand the rail transportation system,
- the need for government to accept continuing responsibility for the maintenance of an effective and affordable grain transportation system,

2 Dr. J.C. Gilson "Western Grain Transportation Report on Consultations and Recommendations", Department of Supply and Services, Ottawa, Canada, June 1982.

- an acknowledgment that both producers and government should share in the increased costs of improved grain transportation,
- the need for government measures to protect producers from precipitous or excessive increases in transportation costs, and
- a belief that the "Crow benefit" represents an historic entitlement to western grain producers.

Not all parties subscribed entirely even to these broad principles. By and large, however, these opinions were shared by most participants in the consultation process. In turn, these principles formed the basis for parts of Bill C-155, which became the Western Grain Transportation Act.

Western Grain Transportation Act (WGTA)

Bill C-155, an Act to reform the Statutory (Crow's Nest) rates, was passed by the House of Commons on November 13, 1983. It was given approval by the Senate on November 14, 1983 and has been proclaimed as law. The Act became effective on January 1, 1984 with a few transitional provisions for the 1983-84 crop year.

The Act also contained a provision for a major review during the 1985-86 crop year, which is currently being undertaken by the Grain Transportation Agency on behalf of the Minister of Transport.

The Gilson report recommended initially apportioning payment of the Crow benefit between grain producers and railways. With the passage of time, the producers' share of Crow benefit would gradually increase, and in 1987-88 both the producers and railways would receive 50 per cent each. Objections were raised to this proposal, primarily by some farm organizations, and an argument was made for paying the entire Crow benefit to the railways. Because of a lack of consensus among farm organizations in western Canada and opposition by prairie pools and Quebec farm organizations, the federal government decided to pay the entire Crow benefit to the railways, contrary to Dr. Gilson's recommendation. Therefore, under the WGTA, the entire Crow benefit has been paid to the railways.

Appointment of the Committee of Inquiry on Crow Benefit Payment

Under the provisions of Section 62 of the Western Grain Transportation Act (WGTA), the federal government, in April 1984, appointed a committee to provide recommendations on the method of Crow benefit payment.

The committee held public hearings and sought input from farm organizations, grain companies, the two national railways and the provincial governments from western Canada.

In addition to the legislative mandate, the Minister of Transport provided supplemental terms of reference to the committee for further guidance, which were as follows:

1. Criteria

The committee will assess and make recommendations on who should receive the government funds as provided for in the WGTA and by what means and manner these funds should be distributed. In making its recommendations the committee should consider the following criteria in assessing the various methods of payment that have or may be proposed:

Resource Neutrality The method of payment should not deter the influence of market forces in determining production and marketing patterns in Canadian agriculture.

Equity The method of payment should ensure that government funds are distributed in an equitable manner in terms both of the recipients and their share of those funds.

Efficiency The method of payment should not prevent freight rates from encouraging the efficient use of the grain transportation and handling system.

Administrative Feasibility The method of payment should be relatively easy to administer without incurring excessive costs.

2. **Agricultural Impacts**

The committee, in assessing the alternative methods of payment, should take into account, amongst others, the following considerations:

- The impact on freight rates and on net out-of-pocket costs to statutory grain shippers.
- The effect on realized farm gate prices for grain in both eastern and western Canada.
- The impacts on both western and eastern agricultural output resulting from the above noted farm gate price changes, including such things as grain production and marketing, and secondary agricultural processing.
- The impact on major inputs used in domestic agriculture caused by the estimated production/marketing/processing changes.
- The consequences for national and regional farm incomes both in the aggregate and, where feasible, at the farm level.
- The administrative feasibility and costs of implementation.

3. **Transportation and Handling Impacts**

The committee should assess the impacts of alternative methods of payment on the efficiency of the western grain transportation and handling system. In its assessment, the committee should take into account, amongst others, the following considerations:

- The effects of potential efficiency gains on the estimated agricultural impacts.
- The anticipated pace of change in the grain handling and transportation system.
- The implications for western grain transportation costs.

Recommendations of the Committee of Inquiry on Crow Benefit Payment[3]

Recommendations of the committee of inquiry on the Crow benefit payment were based on extensive consultations and research conducted by the Canadian Transport Commission for the committee. The committee viewed the Crow benefit as compensation to grain producers who are affected by a major shift in public policy in Canada. Payment of this benefit can usually be seen as a refund in respect of increased grain transportation costs. The committee made the following recommendations:

1. That a Grain Transportation Refund (GTR), consisting of the 1981-82 fund of $6586 million and government contributions through the inflation protection and safety net provisions of the WGTA, be paid directly to producers in the Canadian Wheat Board (CWB) Designated Area.

3 "The Report of the Committee of Inquiry on Crow Benefit Payment," Winnipeg, March 1985, pp. 15-17.

2. That the Grain Transportation Refund be allocated on the basis of net sales of eligible grains in each crop year, with no minimum or maximum limits on the producer's entitlement.

3. That the payments to individual producers vary directly with the rail freight rates charged in each freight zone.

4. That the role of the Western Grain Stabilization Administration be expanded to include administrative responsibility for the distribution of the Grain Transportation Refund, including all accounting activities involved with purchases and sales records, system monitoring and payments to producers.

5. That the Grain Transportation Refund payments be made quarterly to producers through the Western Grain Stabilization Administration.

6. That the railways be required to post substantial performance bonds to ensure that they satisfy performance requirements as defined by the Grain Transportation Agency.

7. That the principle of compensation be recognized as applying equally to eastern Canadian agriculture where losses resulting from this change of policy are clearly identified, and that an assessment of the impacts of the GTR be conducted after an appropriate period of time with compensation provided where justified in the same proportion of losses as in western Canada; the committee also recommends that such compensation be distributed among eastern provinces in proportion to identified income losses resulting from this change in the method of payment.

8. That all aspects of the GTR, including the effectiveness of necessary legislative measures to be included in the WGTA and the administrative arrangements for its operation be subject to regular monitoring and review.

9. That in any future review of the GTR, consideration be given to the desirability and feasibility of basing future GTR payments on a rolling average of net grain sales to achieve additional resource neutrality.

10. That the GTR be implemented in the first crop year following amendments to the WGTA in respects of payment, safety net provisions and railway bonding requirements.

Review of the Western Grain Transportation Act (WGTA) and the Method of Crow Benefit Payment

The federal government delayed action on the recommendations of The Committee of Inquiry on Crow Benefit Payment because of opposition from the prairie pools and some eastern Canadian farm organizations. In order to diffuse the situation, the federal government appointed the Grain Transportation Agency (GTA) to review the WGTA and the recommendations of the Committee regarding the method of Crow benefit payment. In addition to evaluating the recommendations of the Committee of Inquiry on Crow Benefit Payment, the GTA was asked to assess:

- the ability of grain producers to pay assigned transportation costs.
- cost sharing levels between producers and the federal government beyond the 1985-86 crop year.
- the advisability of beginning a system of awards and sanctions.
- the operation and effect of the safety net provision.
- the need for future reviews of the act.

The GTA also reviewed the list of eligible commodities covered by the WGTA. The GTA report was released by the federal government on June 13, 1986.

The report contains 45 recommendations on the changes to the WGTA. The federal Minister of Transport indicated that there are many useful and positive recommendations put forward and has asked the GTA to discuss these proposals with system participants.

The GTA has recommended that the government should not proceed with the Grain Transportation Refund (GTR) as recommended by the Committee of Inquiry on the Crow Benefit Payment.

The GTA did agree with the Hall Committee in its observation that there are significant shortcomings in the form of domestic distortions and potential international trade problems in paying the federal government commitment either to the railways or directly to producers. The agency therefore recommended that the government pay out its Crow benefit obligation while maintaining the Statutory freight rate and maintaining and strengthening the inflation-sharing and safety net provision of the legislation. This would mean paying producers a sum sufficient to provide them with future income equivalent to what they would have received under the subsidy.

The GTA also recommended that the Minister establish a "Task Force" to determine the basis for the "pay-out"; the time frame for the "pay-out"; the inflation and safety net provisions; and other related factors outlined in the report.

SECTION III

DEVELOPMENT OF TRUCKING IN THE GRAIN INDUSTRY

Trucks have played an important role in the development of the grain industry on the prairies. Trucks are used in transporting grain from fields to storage on the farm, and from there to primary elevators and other grain market outlets. Before the early sixties, farm trucks were considerably smaller and producers had to make several trips to deliver grain to market outlets. However, at that time producers travelled relatively shorter distances to deliver grain. With the abandonment of rail branch lines and closure of primary elevators, distances to grain market outlets have increased significantly.

Intra-Provincial Grain Trucking

Grain producers inevitably truck their grain from the farm to primary elevators for furtherance by rail to its destination. Farm truck hauling has increased with the consolidation of the primary elevator system and abandonment of certain uneconomical branch lines. During the last decade the number of primary elevators has decreased from 1,357 in 1974-75 to about 900 in 1983-84, a decrease of about 34 per cent. The decline in the number of primary elevators resulted in a significant reduction in storage capacity, i.e., from 3.41 million tonnes to 2.74 million tonnes (Table 1).

TABLE 1

LICENSED PRIMARY ELEVATORS AND DELIVERY POINTS IN ALBERTA, 1974-75 TO 1983-84

Crop Year	No. of Elevators	No. of Delivery Points	Capacity (tonnes)	Throughput (tonnes)
1974-75	1,357	449	3,409,410	5,762,404
1975-76	1,330	441	3,371,270	7,271,838
1976-77	1,290	426	3,293,830	7,946,676
1977-78	1,232	406	3,184,850	6,595,400
1978-79	1,210	401	3,167,270	6,309,100
1979-80	1,174	394	3,105,730	8,156,400
1980-81	1,097	374	2,981,270	9,293,100
1981-82	1,040	365	2,901,340	9,887,800
1982-83	979	356	2,778,610	10,079,100
1983-84	899	343	2,740,080	10,114,600

Source: Canadian Grain Commission, "Grain Elevators in Canada", Crop Years 1974-75 to 1983-84.

However, more efficient grain handling and the improved grain transportation system resulted in a throughput increase of about 75 per cent during the last 10 years.

The rationalization of the grain handling and transportation system has increased grain hauling distances for farm trucks. As a result, farmers are buying bigger trucks to increase their payload and reduce the number of trips to primary grain collection points. A study on the use of farm trucks showed that heavier trucks are used more for hauling grain than other farm uses.

A few producers with bigger trucks are involved in custom hauling of grain for neighbors and/or other associates. Intra-provincial movement of grain from farm storage to primary collection points is mostly accomplished by farm truck.

Commercial trucks have also been involved in some movement of grain from farm storage to feed mills or other grain processing facilities. These trucks haul significant amounts of grain from primary grain collection points to feed mills for manufacturing feed. During the early seventies, commercial trucks provided a supplemental service to the railways by hauling grain from primary elevators to inland terminals in Lethbridge and Edmonton. During that time the number of grain truck-trailers doubled in the province. In the 1973-74 crop year, commercial truckers were contracted by the Canadian Wheat Board to haul grain from primary elevators to inland terminals. Figure 1 shows grain deliveries by 373 producers to various market outlets in Alberta. Information in Figure 1 was obtained through a survey of grain producers in the province. Grain deliveries by custom/commercial trucks amounted to 9.5 per cent of the grain delivered to various outlets, excluding farm use. Percentage of grain deliveries to various outlets are based on the total of grain delivered, including farm use. During the 1983-84 crop year about 11 million tonnes of grain were delivered from farms to primary elevators, of which about one million tonnes were delivered by commercial/custom trucks.

Details regarding uses of farm trucks, characteristics of farm trucks, and the size of the commercial grain trucking industry and its configuration are presented in the report, "Trucking in the Changing Grain Industry (Phase I)" - published in the fall of 1985.

Inter-Provincial Grain Trucking

Commercial carriers haul grain to processing plants and feed mills. Most of the grain for such movements originates at primary elevator facilities, and in some instances at the farm. Commercial trucks have played an important role in serving the Canadian livestock industry in feed deficient areas. Alberta supplies most of the feed grain required for the livestock and poultry industry in British Columbia. Figure 2 shows the flow of grain to intra- and inter-provincial markets by mode of transport.

In the seventies, the trucking industry showed tremendous growth and captured a significant share of the interprovincial feed grain and grain products traffic moving under the Feed Freight Assistance (FFA) program. The railways, realizing the erosion of feed grain traffic, initiated special rates in 1978 to recapture this traffic. To some extent the railways have been successful in getting part of the traffic lost to commercial carriers back. A comparison between rail and truck freight rates on grain and grain products from Calgary to Vancouver is presented in Figure 3. During the early seventies the share of truck traffic continued to increase, and peaked at 56.1 per cent in 1976-77. In 1977-78, as a result of

FIGURE 1:

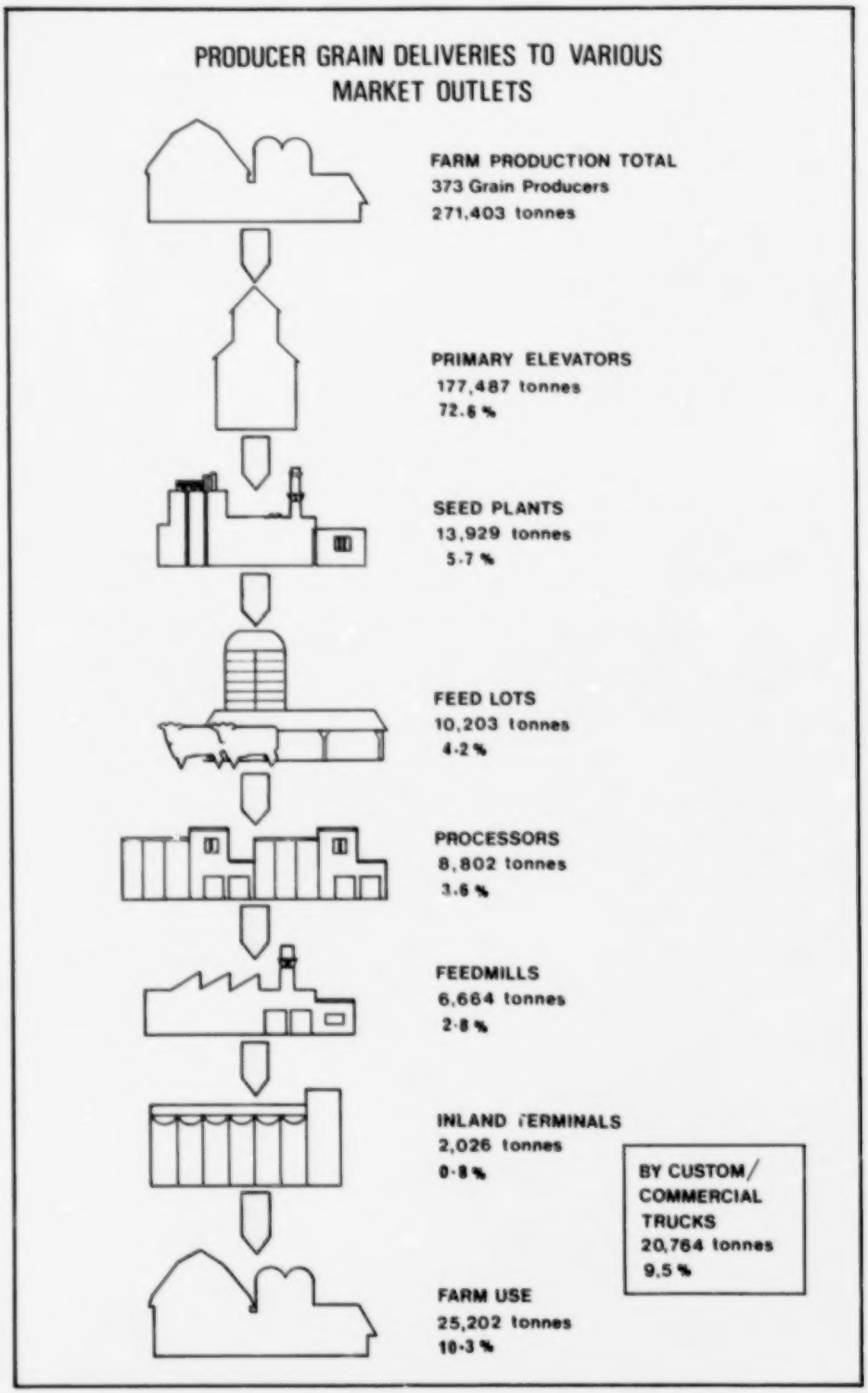

PRODUCER GRAIN DELIVERIES TO VARIOUS MARKET OUTLETS
FARM PRODUCTION TOTAL
373 Grain Producers
271,403 tonnes
PRIMARY ELEVATORS
177,487 tonnes
72.6 %
SEED PLANTS
13,929 tonnes
5.7 %
FEED LOTS
10,203 tonnes
4.2 %
PROCESSORS
8,802 tonnes
3.6 %
FEEDMILLS
6,664 tonnes
2.8 %
INLAND TERMINALS
2,026 tonnes
0.8 %
BY CUSTOM/ COMMERCIAL TRUCKS
20,764 tonnes
9.5 %
FARM USE
25,202 tonnes
10.3 %

FIGURE 2:

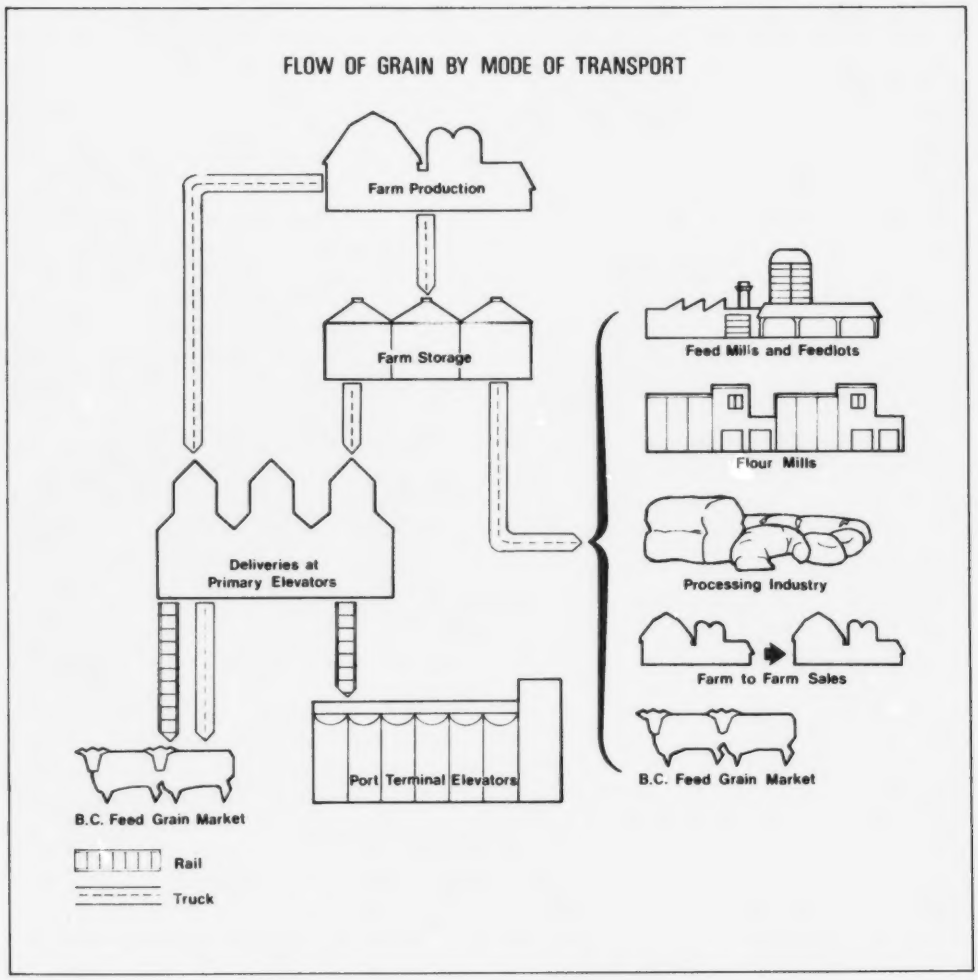
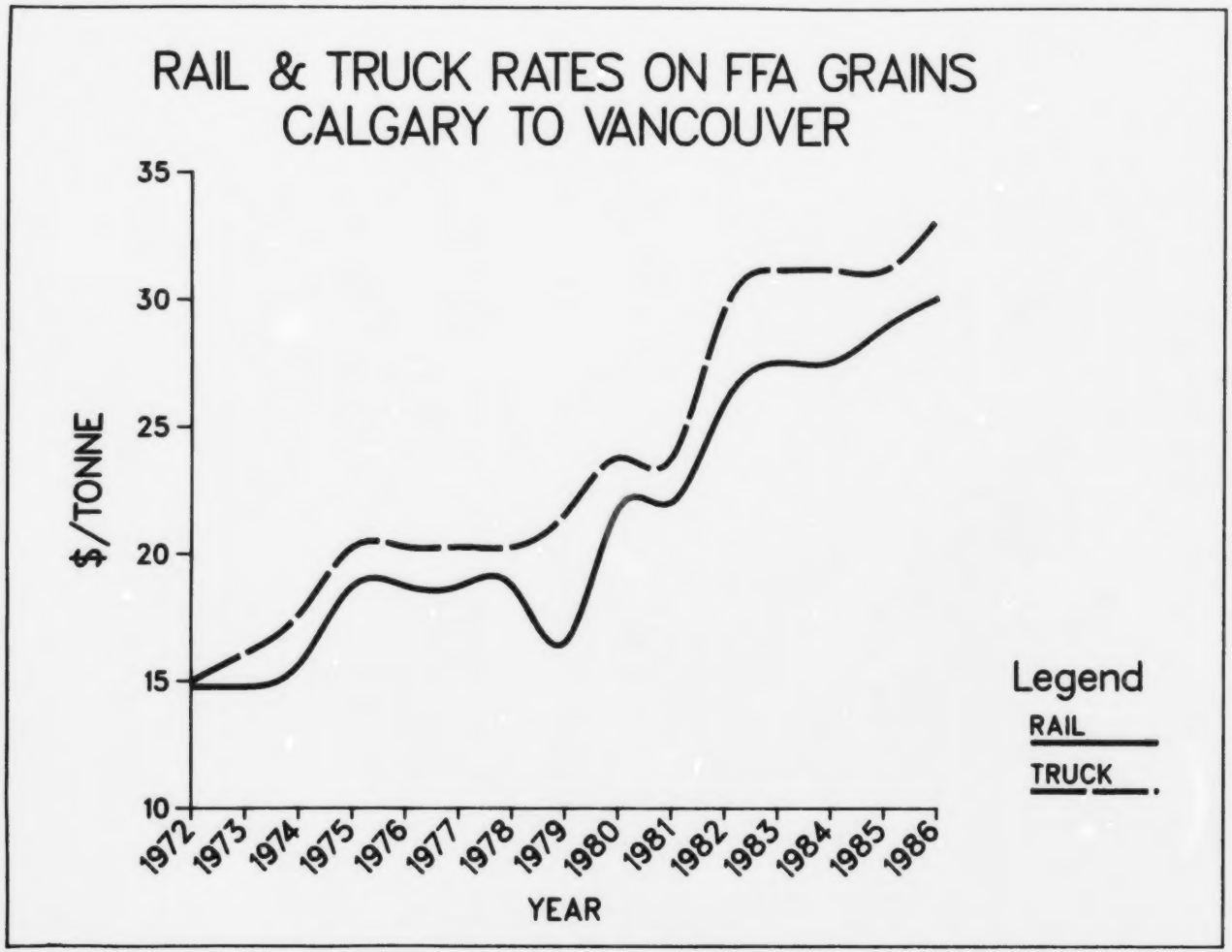

FLOW OF GRAIN BY MODE OF TRANSPORT
Farm Production
Farm Storage
Deliveries at Primary Elevators
Port Terminal Elevators
B.C. Feed Grain Market
Feed Mills and Feedlots
Flour Mills
Processing Industry
Farm to Farm Sales
B.C. Feed Grain Market
Rail
Truck

FIGURE 3:


RAIL & TRUCK RATES ON FFA GRAINS
CALGARY TO VANCOUVER
$/TONNE
35
30
25
20
15
10
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
YEAR
Legend
RAIL
TRUCK

railways establishing "truck competitive" rates from the main shipping points in Alberta, the "truck" share of feed grain and grain products shipped to British Columbia declined to 52.8 per cent. In 1978-79, the share of feed grain traffic by trucks further declined to 38.8 per cent, and has since continued a downward trend. Therefore, a trend which favored commercial carriers in the early seventies has now been reversed in favor of railways, primarily because of lower or special contract rates. Under contract rates, railways are guaranteed 80 per cent of the business by the shipper or buyer of feed grain.

During the 1983-84 crop year, the truck share of feed grain traffic (under the Feed Freight Assistance program) was 34.9 per cent and is expected to stay at this level for some time (Figure 4).

Commercial carriers are transporting feed grain to other provinces and the south western United States. Most of this traffic is back-haul and is very difficult to quantify in terms of volume of shipments. Since the implementation of the Western Grain Transportation Act on January 1, 1984, truck traffic for feed grain and specialty crops has further declined. Truckers have expressed concern on several occasions about placing the specialty crops on the Statutory rates list. Because of a lack of traffic, a significant number of carriers have switched to hauling non-agricultural commodities.

Configuration of the Commercial Truck Fleet for Hauling Grain

The commercial truck fleet used for hauling feed grain products both intra- and inter-provincially is comprised of semis, A-trains and B-trains. An analysis of the list of authorities registered with Alberta Motor Transport Board showed that there were 31 carriers authorized to haul grain or grain related products between the provinces - primarily between British Columbia and Alberta. These carriers owned 119 semis, 26 A-trains, and 48 B-trains to haul grain and grain products within the province, between provinces, and to selected States. Besides these carriers, a few other carriers are hauling grain under authorization for bulk commodities. It is difficult to estimate the exact number of such carriers.

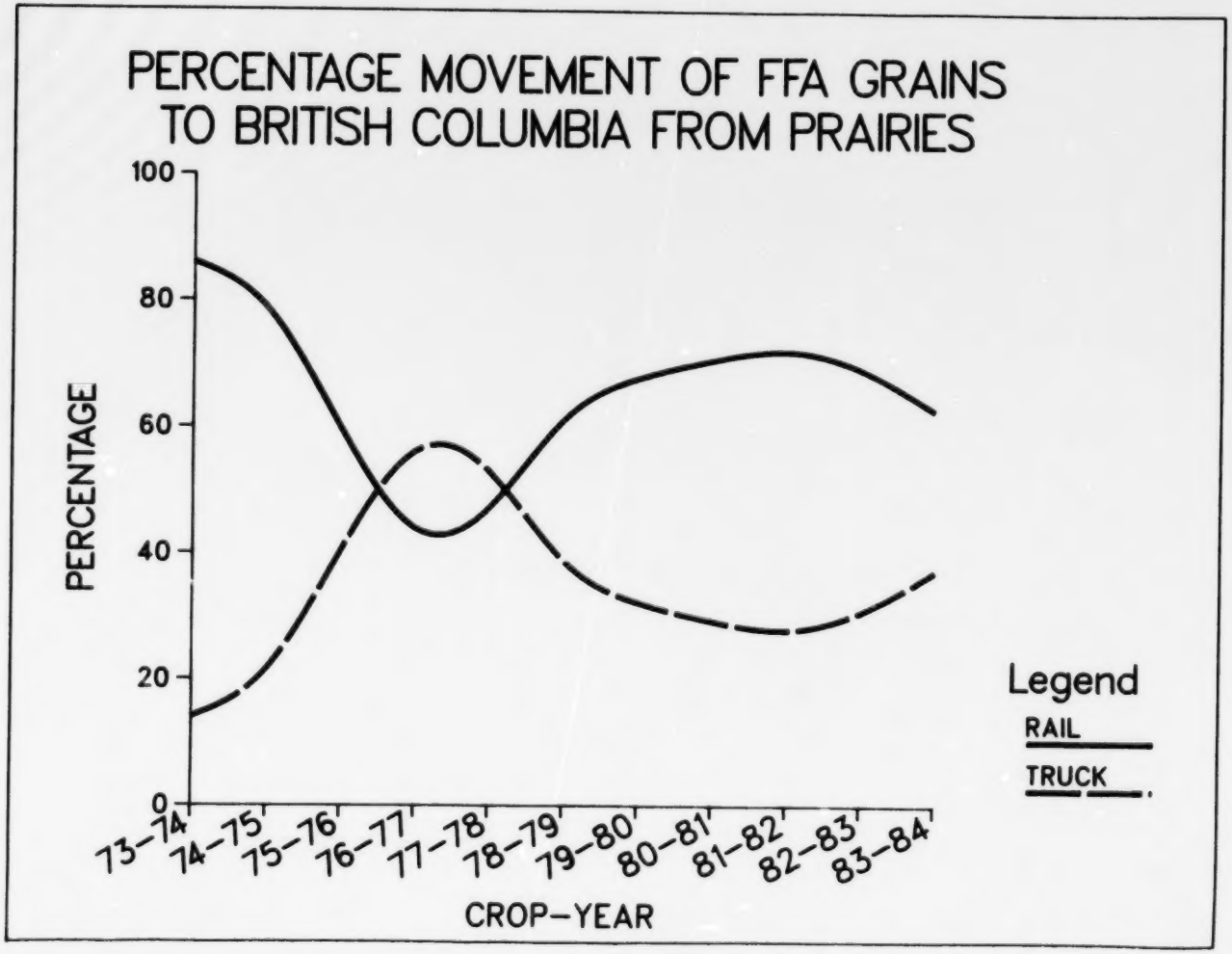
Changes in the Farm Truck Fleet

Records obtained from the Alberta Motor Vehicle Branch show a steady increase in the number of farm trucks registered in the province from 1972-73 to 1982-83. The average increase per year during the above decade was 5.2 per cent. However, in 1983-84, farm truck registrations declined by 3.4 per cent from the previous year.

The distribution of farm trucks by gross vehicle weight indicated a trend towards larger farm trucks. Data show that purchase of heavier trucks has increased over the years as older trucks have become obsolete. The purchase of heavier trucks is primarily geared to achieve transportation efficiencies. Farmers are considering several factors, like fuel efficiency, operating and maintenance costs, payload of the truck and distances to market outlets, etc., when replacing older trucks.

A survey of 373 farmers in 1985 showed some clear weight related patterns of use for farm trucks. As vehicle weight increases there is a corresponding increase in the use of trucks for hauling crops. It is anticipated that grain producers will continue replacing their old fleet with heavier, fuel efficient trucks to achieve economic efficiencies. Moreover, with the consolidation/rationalization of the grain handling and transportation system, grain producers will have to haul longer distances.

FIGURE 4:


PERCENTAGE MOVEMENT OF FFA GRAINS
TO BRITISH COLUMBIA FROM PRAIRIES
100
80
60
40
20
0
PERCENTAGE
73-74
74-75
75-76
76-77
77-78
78-79
79-80
80-81
81-82
82-83
83-84
CROP-YEAR
Legend
RAIL
TRUCK

SECTION IV

IMPACT OF CROW BENEFIT PAYMENT ON TRUCKING

The federal government's decision to pay the entire Crow benefit to the railways has overlooked the role of commercial trucks in the grain industry. The payment of the Crow benefit has become the main issue among various groups involved in the handling and transportation of grains. Several groups have evaluated the impact of paying the Crow benefit to railways on the overall economic situation of western Canada in particular, and Canada in general. Since the implementation of the Western Grain Transportation Act (WGTA) on January 1, 1984, railways have been receiving the Crow benefit payment. Railways will continue receiving this payment until the federal government decides otherwise (i.e., it changes the method of payment so that it goes to producers or is split between producers and railways). As mentioned earlier, a decision was expected after the report of the Committee of Inquiry on Crow Benefit Payment; but the government has referred this issue for further evaluation by the Grain Transportation Agency (GTA). After the completion of the GTA review a decision is expected on the method of payment and other related issues being studied in the Act. In the following sub-sections an attempt has been made to determine the future role of trucking for grain transportation under the following scenarios:

- pay the railways
- pay the producers

Trucking Industry Concerns

Pay the Railways

1. The decision of the federal government to pay the Crow benefit to railways and to add specialty crops to the Statutory crops list has been widely criticized by representatives of the trucking industry. In the view of the trucking industry, the opportunities for inter-modal competition in grain handling and the reduction in grain transportation costs would be substantial, particularly if railway rate structures would permit variable rates. In addition, other efficiencies could be achieved through the added flexibility provided by trucking.

   The visibility of actual grain transport and handling costs would permit producers to exercise a choice among alternative transportation and handling facilities.

2. The trucking industry also points out that the "pay the railways" feature of the WGTA rejects the principle of equal treatment, as set out in the preamble to the National Transportation Act of 1967 which states:

   > It is hereby declared that an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada, and that these objectives are most likely to be achieved when all modes of transport are able to compete . . . regulations of all modes of transport will not be of such nature as to restrict the ability of any mode of transport to compete freely with any other modes of transport.

3. Truckers have argued that payment of the Crow benefit to railways does not allow producers to choose a least cost grain transportation mode. Other groups/organizations favoring payment to producers, as well as trucking industry representatives, have pointed out that under the "pay the railways" option, grain transportation costs are hidden, and producers have no or very little apparent economic incentive to reduce handling and transportation costs. If the full costs of grain transportation are known to producers they will search for the most cost-effective method of transporting grain. If the producers do not know these costs they are locked into a relatively inefficient system, served by the railways at Statutory rates regardless of cost variations within the system.

4. If producers are given the opportunity to choose the transportation and hauling configuration that would be lowest cost to them, then over the longer run the benefits to grain producers would exceed any additional costs that might result from a change in policy. Moreover, the producers would be able to make production and marketing decisions independent of Crow benefit payments.

5. Trucking industry representatives claim that with the implementation of the WGTA the number of carriers hauling grain and grain products has decreased considerably over the last two years. A few truckers have switched to hauling other commodities, and some have merged with other carriers for survival. Carriers have reported that the number of grain trailers has decreased, from over 400 in the mid seventies to about 230 in the eighties.

6. It is also argued that by paying the Crow benefit to the railways, the federal government is forcing commercial carriers (mostly grain haulers) to move out of rural communities that they have been serving for the last several years. Most carriers working in rural communities are local residents who purchase, maintain, and service their vehicles in the community. The economic activities generated by commercial truckers would be lost under the "pay the railways" option. It is difficult to quantify such activities because of their diverse nature. However, there would be some effect on gasoline/diesel sales, employment opportunities, sales of parts and equipment, truck maintenance and repair services, etc.

7. A strong feeling among commercial carriers is that unless farmers are paid the Crow benefit, they will be unable to benefit directly from system efficiencies. The opportunity for innovations such as unit train movements and using truck transport for branch line rationalization and elevator consolidation will be lost.

   Truckers also argue that paying subsidies on uneconomic lines involves unfair government intervention, which reduces competition from other modes of transport - namely the local trucker. Continuous subsidy payments retard the application of innovative technologies and operating techniques which could result in lower costs. Furthermore, the federal government could forego millions of dollars of expenditures in upgrading and maintaining uneconomic branch lines if payments were made directly to the farmers.

Pay the Producers

Commercial trucking industry representatives, some farm organisations, and the Alberta government have emphatically stated the importance of paying the Crow benefit to producers. Since the completion of the Gilson Consultation process, several studies have been done on the Crow benefit payment issue (listed under references) and most of these favor payment to producers.

As mentioned earlier, the grain companies fear that if the Crow benefit were paid to producers, they (grain companies) would not be able to direct the marketing of grain, and some of their potentially obsolete facilities might be bypassed by producers who wish to realize better prices and lower elevator costs by delivering grain to high throughput elevators. They might also bypass facilities that are not so obsolete.

The grain handling and transportation system has been undergoing rapid consolidation because of:

- an attempt by the elevator companies to achieve greater efficiency and profitability in grain handling through the use of fewer elevators and higher throughput capacities. Older facilities that are kept in use with little repair are eventually demolished. New elevators can handle more grain at a lower cost per tonne and attract greater deliveries from relatively larger areas.
- rail branch lines abandonment.
- some branch lines falling into disuse even in the absence of formal abandonment decisions.

The above and other related factors have led to an increase in grain hauling distance from farm to primary grain collection points. Estimates of farm hauling distances vary considerably from one region of the province to another, i.e., from 2 to 65 kilometres (1 to 40 miles). Increases in hauling distances and costs have increased the role of commercial/custom and farm trucking in the agriculture industry.

Paying the Crow benefit to producers as suggested by the Hall Committee would have the following impact (direct) on trucking:

1. Producers would have full knowledge of costs of the grain handling and transportation system. A survey done for the Alberta government revealed that 67 per cent of grain producers could not estimate what they paid to transport a bushel of grain by rail to Vancouver.[4] Only 15 per cent of respondents estimated the cost to be in the range of 21 to 40 cents a bushel. If full costs were disclosed to producers, they would strive to minimize these costs by evaluating alternatives. One of the obvious alternatives is the use of commercial/custom trucks to reduce initial grain handling costs.

2. Paying the Crow benefit to producers would provide them with the opportunity to influence the future development of the grain handling and transportation system for which they are being forced to assume an increasing portion of the costs. The opportunities could be through the increased use of commercial/custom trucks delivering grain to more efficient high throughput elevators offering better prices and services.

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4 "Alberta Producers' Grain Transportation Survey", Angus Reid Associates Inc., January 1985, pp..28.

3. If the Crow benefit is paid to producers, alternatives to the existing primary elevator and uneconomical branch line network can be evaluated to minimize grain handling costs. An "off-line elevator" concept has been suggested by various studies as one of the alternatives to minimize costs. An off-line elevator could be kept in an already established community. In this way the community would not suffer a tax loss.

4. Another alternative mentioned earlier is the use of large and efficient commercial trucks. Trucks using existing roads have proven to be a lower cost alternative for assembly and consolidation of solid train movement. Some of the advantages are net system cost savings, minimizing premature obsolescence of elevators, greater train service frequency at rail head, more stable clearing of primary elevators, improved overall efficiency of railway operations, and stimulation of local trucking interest.

5. The Report of the Inquiry into Railway Branch Lines, while evaluating off-line elevators/trucking options concluded (on the basis of several case studies conducted by interested parties for this inquiry)[5] that:

   - off-line evalator-trucking operations are substantially lower in cost than conventional branch line operations.
   - off-line evalator-trucking is, in all cases studied, substantially cheaper than conventional branch line operations or short line operations.
   - extended producer trucking is slightly lower in cost than off-line elevator-trucking operations.

   Most parties to the inquiry who commented on the relative merits of alternatives to traditional branch line operations including the mainline railways, agreed that trucking would, in general, offer cost savings and that the potential for shortline railways offering significant system cost reductions and efficiencies was low.

   In view of the above, there appears to be a unique opportunity to have grain producers involved in developing an efficient grain handling and transportation system by:

   - paying the Crow benefit to producers; and
   - exposing full costs of the system to grain producers.

6. A study done by IBI Group for Transport Canada concluded that payment of the Crow benefit to farmers would encourage added trucking of grain.[6] Expanded grain shipments are unlikely to generate substantial road costs, as only a few extra trucks per day would be added to the traffic on most links. Moreover, larger trucks with proper axle loads and configurations are less damaging than the standard single-axle or two-axle farm truck. Table 2 shows the road effect of various truck types moving 7,500 tonnes of grain per year.[7] Results of the analysis presented in the IBI study suggest that if all grain now hauled in two-axle straight trucks was hauled instead in A-trains, pavement damage from grain trucking would be reduced to about three-fifths of the current level.

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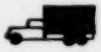
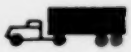
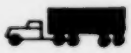
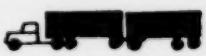
5 "Report of the Inquiry into Railway Branch Lines", Canadian Transport Commission, Western Division, Saskatoon, Saskatchewan, pp.64-67.

6 "The Role of Trucking in the Grain Industry", IBI Group, Toronto, Ontario, February 1985.

7 Information supplied by Mr. Gordon Halls, Alberta Transportation.

TABLE 2

EFFECT ON ROADS OF MOVING 7,500 TONNES OF GRAIN WITH VARIOUS TRUCK TYPES

TRUCK TYPE	MAXIMUM ALLOWABLE GROSS VEHICLE WEIGHT TONNES	PAYLOAD TONNES	TRUCK LOADS PER YEAR NUMBER	E.S.A.L.*
Staight truck: 2 axles	14.1	9.6	781	2.50
Tandem straight truck: 3 axles 	21.0	14.4	521	2.12
Tractor and tandem semitrailer: 4 axles 	30.1	20.6	364	3.76
Tandem tractor and tandem semitrailer: 5 axles 	37.0	25.4	295	3.38
Tandem tractor, tandem trailer, full trailer: 7 axles-A-train	53.5	36.1	208	6.65
Tandem tractor, tandem semitrailer, tandem semitrailer: 7 axles-B train 	53.1	36.9	203	4.83

*E.S.A.L. - Equivalent Single Axle Loads.

Source: Mr. Gordon Halls,
Deparment of Transportation,
Edmonton, Alberta.

The analysis further suggests that the continuing shift towards the use of larger trucks for hauling grain will not itself produce increased highway costs for pavement reconstruction; on the contrary, paved highways should last longer under these conditions, and incremental costs may be reduced by about five per cent in 1990 from what they would be if no shift in the grain truck fleet mix took place.[8]

7. If the Crow benefit is paid to producers (the group for which this benefit has been designated) the federal government would not be subjecting truckers to unfair competition. It would help owner-operators in rural communities to continue to live there and participate in the community developmental activities. The payments received by producers would be spent in the local communities, thus increasing economic activity in rural areas. An active and well adapted grain trucking industry can play a strong role in the development of new agricultural areas which lack a well developed rail network and/or primary elevator system; for example, the Peace River area. It could be suggested from the Peace River Region experience that truckers (commercial, custom and producers) will be able to adapt to the marginal increase in haul length that would result from future consolidation of the rail network and/or primary elevator system.

8. Producers hauling grain longer distances with smaller farm trucks can benefit from cost savings offered by commercial/custom truckers. Table 3 shows commercial truck rates for transporting grain in Alberta. Table 4 provides a comparison between commercial truck rates and average farm truck costs for transporting grain.

   A survey of grain producers taken in the winter of 1985 revealed that custom haulers (farmers with big trucks) sometime offer rates 15 to 20 per cent below commercial truck rates. When producers realize savings in transportation costs they will be inclined to use more commercial/custom truckers. Trucking activity will only increase if producers are made aware of the full costs of the grain handling and transportation system; which is only possible if the Crow benefit is paid to producers.

9. Payment of the Crow benefit to producers would encourage them to have their grain trucked further to elevators offering better rates and/or services. Moreover, it would allow an orderly consolidation of the present country elevator system and abandonment of uneconomic branch lines. There are a significant number of primary elevators in the province with throughput of less than three turnovers. If some of the adjacent points are taken out and replaced with improved facilities with higher throughput, elevator costs could be reduced by $1.50 to $2.00 per tonne by attracting grain from a larger area. Such a change would significantly improve efficiency of the grain handling and transportation system.

   A study[9] by Agriculture Canada showed that an elevator with lower capacity (1250 tonnes) and turnover ratio of 3:1 could offer savings of $2.40 per tonne if the turnover ratio was increased to 5:1. An elevator with higher capacity (6250 tonnes) could offer savings of $1.20 per tonne if the turnover ratio was increased from 3:1 to 5:1. If the turnover ratio for the high capacity elevator is increased to 6:1, the savings could increase to $1.60 per tonne.

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8 IBI study, pp. 56-58.7

9 Waithe, D., "Evolution of the Primary Elevator System in Western Canada," Agriculture Canada, Marketing and Economics Branch, Ottawa, 1984.

TABLE 3

INTRA-PROVINCIAL COMMERCIAL TRUCK TRANSPORTATION RATES ON GRAIN AND GRAIN PRODUCTS

From: Points in Alberta
To: Calgary, Edmonton and Lethbridge, Alberta

Distance in km	Rates in ¢/t	Distance in km	Rates in ¢/t
0 to 48	572	178 to 193	1197
49 to 64	650	194 to 209	1274
65 to 80	702	210 to 225	1352
81 to 97	780	226 to 241	1404
98 to 113	832	242 to 257	1483
114 to 129	937	258 to 274	1535
130 to 145	989	275 to 290	1639
146 to 161	1067	291 to 306	1691
162 to 177	1119	307 to 1769	1769

Note 1: Minimum charge will be the charge for 20.41 tonnes. Full capacity of the unit is 22.68 tonnes.
Note 2: For farm pick-ups add $2.20 per tonne.

TABLE 4

COSTS FOR HAULING GRAIN BY FARM AND COMMERCIAL TRUCKS

AVERAGE DISTANCE	FARM TRUCK Box Capacity 7.9 tonnes	COMMERCIAL TRUCK Box Capacity 21 tonnes
15 km	$4.37/t	$5.72/t*
20 km	$5.80/t	$5.72/t*
48 km	$8.64/t	$5.72/t*

* Add $2.20 per tonne for farm pick-up.

Elevator costs normally decrease as elevator size increases, as long as the handling to capacity ratio remains the same.

Average capacity of primary elevators in Alberta is about 3,050 tonnes, with an average turnover ratio of about 3.5:1. Further improvements in the throughput, coupled with increased capacity, could reduce elevator operating costs significantly.

10. An increase in agricultural productivity, especially in the grain sector, would increase trucking activity for intra- and inter- provincial movement of grain and grain products. The custom and commercial trucking share of primary movement will increase as these become more cost-efficient with an increase in the hauling distance.

The economic impact on commercial trucking would result in increased employment opportunities in rural communities. It could be anticipated that if the statutory rates increase significantly during the next three to four years, producers would switch to commercial/custom trucking to reduce initial grain hauling costs. Thus, the commercial truckers' share of primary and secondary movements of grain would increase. The IBI study projected that by 1990 the commercial truckers' share of primary haul could be between 15 and 23 per cent, depending on consolidation of the primary elevator system.

At present, commercial/custom truckers haul about seven to ten per cent of the grain delivered to primary elevators, feed mills and processing facilities, etc. Increased trucking activity would have positive economic impact on rural communities through increased employment, with an average employment multiplier in the range of 1.5 to 2; that is, every new basic job directly created in these communities would result in an overall addition of between 1.5 to 2 jobs to the community's economy.[10] As mentioned above, increased trucking would increase demand for physical inputs to trucking operations: gasoline and diesel fuel, tires, new tractors and trailers, and truck maintenance and repair services.

11. Trucking industry representatives claim that the increased use of trucks to haul grain from primary elevators would make the nation's grain transportation system more efficient. Test hauls carried out in the mid-seventies in Saskatchewan and Alberta have shown that trucks can reduce the turn-around time of grain hopper cars by as much as one-half. The trucking program undertaken in Alberta during the 1973-74 crop year relieved rail cars which were usually tied up on the tracks, either near the primary elevators or at the terminals. Injecting truck services expedited grain movement to the ports. Discussion with a Canadian Wheat Board official revealed that rail cars took seven days from Lethbridge to Vancouver and back. Prior to this exercise railcars (when spread in the primary elevators) used to take 12 to 15 days for the same trip.[11] During the 1973-74 crop year, the trucking program in Alberta moved 45,252 tonnes of wheat and 60,939 tonnes of barley from primary elevators to an interior terminal in Edmonton. A total of 163,700 tonnes of wheat was transported to the

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10 Saskatchewan Department of Municipal Affairs, "A Development Plan for Moose Jaw: Technical Supplement," Regina, 1965.

11 Chaudhary, G. Nabi, "Motor Truck Transportation of Grain to Inland Terminals in Western Canada", Alberta Agriculture, Agdex 843, 1975, pp.14.

Lethbridge terminal. Over 267,500 tonnes of wheat and barley were transported to the two terminals by truck on behalf of the Board during the 1973-74 crop year. Efficiencies in grain handling and transportation can only be achieved if the Crow benefit is paid to producers, thus allowing them or the Canadian Wheat Board to select the mode of transportation on the basis of cost and performance.

12. Quicker trips for grain rail cars would reduce the need for additional cars, resulting in significant savings for the public treasury. Greater use of trucks would allow the government to reduce the subsidy it pays railways for shipping grain on uneconomic branch lines. Several studies have pointed out that grain handling and transportation system costs can be reduced if railway equipment is used more efficiently.

13. Increased grain trucking to more efficient rail delivery points will reduce the overall costs of the grain handling and transportation system. By increasing throughput at primary elevators, grain companies can offer significant reductions, i.e., anywhere from $2.00 to $3.00 per tonne, in grain elevation tariffs.[12] Furthermore, the railways can offer multiple-car rates at high throughput elevators and terminals, which can lower the rates by another $2 to $6 a tonne depending on the number of cars.[13] If these savings were passed on to producers they would not hesitate to haul grain longer distances to more efficient facilities. In turn, longer hauls would encourage producers to use more commercial and/or custom carriers. As pointed out earlier, retention of the current method of Crow benefit payment limits the motivation of producers to seek efficiencies in transporting their grain because they see less of the real cost of transporting grain compared to a situation where they would directly receive all or part of the payment. Therefore, a change in the method of payment would be an incentive for efficiency.

14. There is general agreement on all sides of the debate that paying the Crow benefit to producers will lower grain prices on the prairies and encourage more domestic use of grain. Increased domestic use of grain will encourage more intra- and inter-provincial trucking of grain.

    A concern has been raised in eastern Canada that paying the Crow benefit to producers would encourage growth of the livestock industry in western Canada. Most studies have concluded that under the pay-the-producers proposal expansion of livestock production in the west would be modest, having little effect on livestock production in eastern Canada.

    The IBI study estimated that increased trucking activity for hauling grain could add $22 million to revenues of the commercial trucking industry on the prairies. Alberta's share of this additional revenue could be between $7 to $9 million per year.

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12 Hoffman, Linwood A., Steve C. Birmingham, and Lowell D. Hill, "The Impact of Unit-Trains on Price Relationships at Country Elevators," A Research Paper Published in Illinois Agricultural Economics, Vol. 16, No.2, July 1976.

13 U.S. multiple-car rail rates on grain.

Impact of Increased Trucking on Rural Communities

Paying the Crow benefit to producers is expected to have positive effects on rural communities. As mentioned in the previous sections, it would certainly lead to increased trucking activity in rural areas. Rationalization of the grain handling and transportation system will increase hauling distances, thus increasing farm trucking costs. To reduce these costs, producers will be required to evaluate alternatives. One cost-efficient alternative to increased farm trucking costs for longer hauls is the use of commercial/custom trucks. Another alternative would be to buy larger trucks, which would require a huge investment. For a majority of the producers such an investment would not be economically feasible.

An increase in grain production will increase the demand for trucking services. Therefore, the commercial and/or custom trucking share of primary movement will increase as these become more cost-efficient on longer hauls. The increased trucking activities in rural areas will increase demand for physical inputs to trucking operations: gasoline and diesel fuel, tires, new tractors and trailers, and truck maintenance and repair services. It is estimated that the creation of one job in trucking will have a multiplier effect of two in service related areas. Thus, an increase in the commercial carriers' share of primary and secondary movement will increase revenue and employment opportunities in those areas. At present, commercial/custom truckers haul about seven to ten per cent of the grain delivered to primary elevators, feed mills/feed lots, seed cleaning plants and processing plants. If rationalization of the grain handling and transportation system continues at the present rate, it is expected that the share of commercial truckers will increase to about 20 per cent by the early ninties.

It has often been mentioned that increased trucking activities on secondary and local roads would cause damage, thus increasing road maintenance costs. A submission by Alberta Transportation to the Grain Handling and Transportation Commission in 1977 stated "larger trucks can haul a quantity of grain with fewer equivalent load units and less resultant damage to roads than if same quantity of grain was moved by smaller trucks". Data in Table 2 show the road effect of various truck types to move 7,500 tonnes of grain per year.

A study done in west-central Saskatchewan by the Canada Grains Council to assess the impact of rail line abandonment on roads in the region concluded that, since farm trucks tend to be overloaded relative to tire equipment, the use of commercial trucks would reduce road maintenance costs. Oil surfaced roads may not stand the heavy load stress and would require upgrading. Therefore it is suggested that the federal government make a lump-sum payment in areas where such upgrading would be required. Part of the savings from abandoning uneconomic branch lines can be used for the above purpose.

Rural population has been declining for the past several decades. This trend is not because of closure of primary elevators and abandonment of branch lines, but because of rising labor productivity in agriculture, faster and more comfortable road transportation, and increased employment opportunities in urban areas, etc. The trend is irreversible as farm size continues to increase and farm population continues to decline (Table 5).

Any activity undertaken in rural communities, whether it be commercial/custom trucking or a processing plant for feed manufacturing, would certainly add to the viability of a community. A detailed study by Underwood McLellan of 21 communities that had actually lost rail lines and/or elevators before 1972 showed that the loss was not particularly detrimental. The removal of a branch line need not have an observable impact on the viability of the community.

TABLE 5

POPULATION, OPERATORS, FARMS AND AREAS BY CENSUS YEAR, ALBERTA

ITEM	1951	1961	1966	1971	1976	1981
			POPULATION			
			number			
TOTAL POPULATION	939 501	1 331 944	1 463 203	1 627 874	1 183 037	2 237 724
FARM POPULATION	345 222	287 814	281 583	237 924	219 300	195 284
			OPERATORS			
			number			
TOTAL NUMBER OF OPERATORS REPORTING OPERATORS	84 044	73 212	69 411	62 702	61 130	58 056
CLASSIFIEDBY AGE:						
UNDER 25 YEARS	3 630	2 313	1 916	1 591	2 164	2 011
25-34 YEARS	17 003	11 882	10 460	8 915	9 978	10 419
35-44 YEARS	21 050	18 639	17 244	15 088	14 662	13 664
45-54 YEARS	19 802	18 739	18 516	17 930	16 546	15 075
55-59 YEARS	8 173	8 416	7 949	7 225	6 908	6 568
60-64 YEARS	11 638	6 105	6 555	5 684	5 217	5 045
65-69 YEARS		3 747	3 857	3 638	3 058	3 005
OVER 69 YEARS	2 748	3 371	2 914	2 631	2 597	2 269
			FARMS			
			number			
TOTAL NUMBER OF FARMS	84 315	73 212	69 411	62 702	61 130	58 056
FARMS CLASSIFIED BY SIZE:						
UNDER 3 ACRES	195	238	323	204	165	321
3-9 ACRES	1 203	683	792	700	565	589
10-69 ACRES	2 039	1 813	2 298	2 521	3 548	3 352
70-239 ACRES	23 712	15 408	12 648	10 609	11 572	12 426
240-399 ACRES	24 562	19 385	16 473	12 606	10 877	9 383
400-559 ACRES	12 071	11 763	10 966	9 128	7 947	6 844
560-759 ACRES	7 664	8 421	8 662	8 196	7 269	6 404
760-1119 ACRES	6 369	7 498	8 219	8 478	8 172	7 600
1120-1599 ACRES	3 309	3 969	4 464	4 846	5 038	4 978
OVER 1599 ACRES	3 191	4 034	4 566	5 414	5 977	6 159
NON-RESIDENT FARMS	8 311	7 396	7 414	7 617	6 787	5 142

Source: Canada Census, 1951-1981.

Resource Neutrality

Resource neutrality was one of the four criteria for the guidance of the committee in addition to the legislative mandate to review and recommend on the method of payment of the Crow benefit.[14] The other three criteria were:

- Equity
- Efficiency
- Administrative Feasibility

The committee's interpretation of the resource neutrality criterion was that a method of payment should not interfere unnecessarily with market forces and producer choice in determining production and marketing patterns in agriculture. In recommending payments to producers, the committee affirmed that production and marketing decisions can, and should, be made by producers themselves. The record of success of western agriculture demonstrates the ability of producers to conduct their business effectively.

The quantitative studies conducted for the committee indicated that a continuation of paying the Crow benefit to railways would result in a less "well off" outcome for agriculture than would occur through a more resource neutral method of payment.[15] The committee concluded that in order to encourage producer interest to enhance efficiency in the grain handling and transportation system,[16] the method of payment should make producers aware of the full costs of grain transportation.

Research conducted for the governments of Canada and Alberta indicated a relatively low level of awareness of transportation costs, including the costs paid directly by producers under the current pay-the-railways method of payment. Because western grain producers are the most directly affected by the changes in transportation policy, the committee felt it essential they be provided with full and complete information as to their economic situation under the new policies in order that they make appropriate and independent business decisions. Therefore, the committee concluded that the pay-the-railway approach would not provide producers with clear information relating to the transportation costs actually associated with the operations of their individual businesses.[17]

In evaluating the efficiency of the grain handling and transportation system, the committee concluded that the benefit must be paid in a way that does not favor one mode of transportation over another, but rather leaves such decisions to individual producers. The pay-the-railways approach results in an undesirable incentive for the use of rail transportation rather than trucking unless accompanied by offsetting payments which, in the committee's view, unnecessarily complicates the system and runs counter to the objectives of the National Transportation Act.

Groups favoring the pay-the-producers option have repeatedly emphasized that the pay-the-railways option does not allow producers the choice of marketing or modes of transportation and keeps them captive to the railways.

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14 The Committee of Inquiry on Crow Benefit Payment, "The Report of the Committee of Inquiry on Crow Benefit Payment," Winnipeg, Manitoba, March 1985.

15 Ibid. pp.118.

16 Ibid. pp.124.

17 Ibid. pp.125.

Under pay-the-railways, the producers have no incentive to select the mode of transportation which offers the greatest efficiency and lower costs. The federal decision on Crow benefit payment has preserved inefficiencies in the grain handling and transportation system rather than alleviating the inherent problems. Furthermore, the decision is quite contrary to the objectives of resource neutrality and efficiency.

Grain Handling and Transportation System Efficiency Measures

The grain handling and transportation system presently in place does not encourage transportation efficiency and maintains cost-ineffective operations, contrary to the objective of the national transportation policy. Maintaining the status quo will cost grain producers more to use the system. All the parties involved in the system, namely, the federal government, the railways, the grain companies, and producers, should make earnest efforts to introduce measures which will reduce the overall costs of transporting grain to export positions and local markets and also make the system more efficient and effective. The following are some of the suggested measures which can be undertaken with least cost to improve efficiency.

Federal Government Efficiency Measures

The federal government should settle the the Crow benefit payment issue in a way which will expose all the transportation system costs to the users. It should allow competition between different modes, as stated in the National Transportation Act. Specifically, the federal government can undertake the following measures to promote efficiency and cost savings:

1. Change the method of Crow benefit payment from the railways to producers so that the full transportation costs are exposed to them. The users will then strive to minimize initial hauling costs by using commercial and/or custom trucks for delivering grain to the primary elevators which offer better price and services.
2. Allow railways and grain companies to implement efficiency measures (discussed below) to reduce overall system costs and retain part of the savings.
3. Allow abandonment of uneconomic branch lines and assist provincial and municipal governments by transferring some of the savings from branch line operations to maintain/upgrade the road network.
4. Encourage competition between the modes.
5. Implement performance objective regulations as stated in the WGTA.

Railway Efficiency Measures

Railways should be encouraged to introduce efficiency measures and some new technology in their operations which could lead to cost savings to shippers. Railway cars which run around the country to collect grain should be able to pickup at central places, full loads of grain of the same grade for export positions. Collecting grain for central loading stations can be complemented by commercial, custom or farm trucks.

Some of the technological innovations and efficiency measures which can result in considerable cost savings are as follows:

1. *Technological innovations*: Current third generation locomotives have increased fuel economy 7 per cent over previous models. This amounts to roughly 2,100 gallons of fuel per year per locomotive. With further engine refinements, higher traction locomotives, improved operating procedures and better maintenance, increases in fuel economy of two per cent per year are possible:
   - Railways should attempt to use six-axle cars to increase the payload. Tare weight reductions of four or five tonnes and the high utilization of freight cars can increase tonne/kilometre productivity by some 10 per cent in the near future.
   - Traffic control systems are the key to further improvements. These systems have the ability to increase system capacity without resorting to major capital investments. As the headway between trains is shortened the capacity of the line is increased. Computers take over many of the clerical duties allowing dispatchers to devote more time to higher order functions of traffic control, thereby increasing safety and efficiency.
   - Marshalling yards should continue to be increasingly automated through computer applications which reduce freight terminal time, increase yard capacity and reduce labor intensive activities.
   - In the area of trackage innovations, continuous welded rail and concrete ties are claimed to last 50 years compared to 30 years for wooden ones. As well, the concrete tie reduces maintenance costs by 30 per cent.

   Large track machines capable of lifting old rail ties, performing all maintenance functions and relaying new rail and concrete ties in one operation are proving effective. Estimates of rail replacement savings run as high as $3 million per year.

2. *Long term outlook*: The external factors which influence technological development in the rail industry include energy, capital, labor, demand, government policy regulation and safety. Energy is the most significant factor. It will most likely determine the policy on electrification, the future of alternate fuel development, and encourage research in fuel-efficient technologies. Capital is the second most important factor. In the capital intensive rail industry, new technologies have been proven effective but will not be implemented if the capital is not available. In general, the rail companies have a lot of new technology available to them which could increase efficiency and productivity and decrease costs. However, because of capital and regulatory barriers, the implementation of new technology will be a slow process.

3. *Co-operation with grain companies*: Many rail efficiency measures require associated changes by grain companies. For example, to decrease grain car turnaround time, high throughput elevators and consistent flow of grain are required. This change will require close cooperation between the parties involved in the grain handling and transportation industry. One of the most beneficial changes to rail operations would be the implementation of unit trains. Adopting a unit train policy would require changes in both grain collection methods and elevator facilities.

   The expanded use of unit trains would also require adjustments at the port terminals. When the market demand begins to exceed the port terminal capacity, producers and grain companies will apply pressure for unit trains hauling blocks of cars carrying the same grade of grain directly to ships. Unit trains offer significant efficiency gains and allow producers and grain companies to respond to market demand.

- *Cabooseless trains*: "End of Train Units" ETU's - these eliminate one man, and possibly two, of a typical four man unit (leaving the engineer and conductor) which results in a decrease in labor costs.
- *Increasing car payload*: Higher car loading may still be possible because of improved cars (lower tare weights) and the increased capacity of rail, etc. Higher tonnage trains may be possible as a result of railway grade reductions, high technology traction devices and mid-train remote locomotives.
- *Speed of train*: Branch line rehabilitation is continuing and will allow speeds up to 50 km/h on branch lines that previously limited speeds to 15 km/h. This will result in decreased turnaround time.
- *Elimination of waiting time*: Double tracking projects are underway which will eliminate waiting time, especially through mountain passes. This will also result in decreased turnaround time.
- *Compatible working hours*: Making working hours of the railways and grain companies compatible will improve the grain handling and transportation system.

Grain Handling Efficiency Measures

If grain companies can introduce some efficiency measures in handling grain, considerable savings can be realized in costs. Some of the grain handling efficiency measures are:

1. *High throughput elevators* A typical primary elevator in Alberta has a capacity of about 3,000 tonnes and usually operates at 2.5 to 3.5 turnover per year, giving it an annual throughput of 7,500 to 12,000 tonnes. The concept of high throughput elevators was developed as a potential solution to some of the inefficiencies inherent in the present elevator system such as: high fixed costs, slow grain car turnaround, long storage time, slow loading and unloading, etc. It involves the consolidation of primary elevators in an area and the development of a single high throughput elevator for the area by modifying existing facilities. Throughput can also be increased simply by introducing operational changes, such as longer hours of operation.

   Other changes which may also be necessary to convert an existing facility into a high throughput elevator are:
   - extend the length of sidings to carry longer strings of rail cars for loading,
   - heavier track and/or upgraded roadbed for sidings; at many of the present facilities, cars cannot be loaded to 100 per cent capacity; 70 per cent loading of cars is quite common,
   - improvements to unloading facilities to allow handling any size of truck; upgrading terminal access roads to ensure adequate flow and capacity for the increase in truck volume,
   - provisions for on-site grain cleaning can offer further savings to producers and therefore may be a consideration in the development of high throughput elevators, and
   - installation of modern computer management systems may be considered in order to achieve maximum cost efficiency.

   Although some of the above changes may be required and/or desirable in the development of a particular high throughput elevator, in most cases, the capital investment required would be relatively small.

These changes should allow loading 10 to 12 grain cars per day from one high throughput elevator compared to the 2 to 3 cars per day seen in a typical primary elevator operation.

2. *Projected development* There are many factors which will affect the rate of consolidation of primary elevators and the subsequent development of high throughput elevators, thus it is difficult to make definite growth estimates. However, if the present market and political and economic factors remain constant, some guesses can be made:
   - development will continue to be slow over the short term, (the next five years) within the order of 3 to 4 high throughput elevators developed per year per prairie province.
   - development will likely speed up in the 1990's and there may be 80 to 100 high throughput points across the prairies by the year 2000.

3. *Off-track loading* Two basic types of off-track loading of grain have been proposed, each having several possible operational variations. The concept of each of the systems is outlined below.
   - Container system: This system makes use of the C/TOFC (container/trailer-on-flat car) designed in a modified form. Containers are dropped off at the farm where farmers fill them as they harvest. The containers are then picked up with a crane by tractor-flatbed units and hauled to a nearby non-elevator rail point. After the weight and grade are recorded, the containers would be emptied and immediately redistributed to farmers. Loaded grain cars are sent to a central terminal/switching facility where they are routed to their proper destination. It is unlikely that the terminal would contain cleaning facilities as the elevation and cleaning of the grain at this point would compromise the time and handling efficiencies which the system offers. The entire process involves just one elevation of the grain at the port terminal.
   - Off-track system: This is a true off-track system in that the initial destination of the grain is a facility which is not associated with a rail branch line. Grain is hauled by farm trucks to a relatively small facility with minimal storage capacity. The grain is unloaded from the small trucks into the elevator, which may or may not have cleaning facilities. From the elevator the grain is loaded into large trucks in A, B, or C trailer configurations and hauled to a central terminal where the grain is loaded into hopper cars to export destinations.

Producer Efficiency Measures

The grain handling and transportation system in place does not provide any incentive to producers to strive for efficiencies and cost-effectiveness. One of the obvious factors could be lack of information on full transportation and handling costs. A survey of randomly selected Alberta farmers showed that about two-thirds could not identify rail rate for their grain (from the delivery point to export positions). And the same goes for the handling and storage charges at primary elevators.

The only way of exposing full transportation costs to producers is by paying the Crow benefit to them rather than to the railways and having the producer pay the full cost of transportation. When the producer is aware of the full rail rate for grain shipments, the knowledge will offer an economic incentive to reduce initial grain transportation costs.

Although producers have very few options in mininizing basic transportation and handling costs, these should still be considered and evaluated. Some of the options that producers may consider are:

1. Hauling grain a few extra kilometres to a primary elevator offering better price and service. A high throughput primary elevator may offer a reduction of $1.50 to $2.00 per tonne in elevation and other related charges. In some instances producers have hauled grain in tandems over 100 kilometres to high throughput elevators to obtain a better price for their products.

2. Producers with smaller trucks should evaluate the possibility of using the service of commercial and/or custom carriers. Studies have shown that over longer hauls, commercial trucks are about 25 per cent less expensive than average farm trucks. Custom truck operators, although not authorized to haul for other producers, can offer even higher savings.

3. Two or more producers should consider joint ownership of a truck trailer. This type of ownership would require working out details in regard to the operation and maintenance of the unit.

4. Single-axle truck owners should consider buying tandems if requirements warrant.

Road Effects of Changes in the Rail System

Several of the commissions, task forces and study groups were made conscious of the concern for the road system by various groups and farm representatives. In this, as in some other areas, a great deal of misinformation exists. However, some of the groups concerned about roads and use of large trucks have not been able to provide a convincing argument that damage to roads would increase from rail line abandonment. Several studies have shown that larger trucks would not damage the roads.

It was recognized that larger trucks can haul a quantity of grain with fewer equivalent load units and less resultant damage to roads than if the same quantity of grain were moved by small trucks. For example, a two-axle carrying seven tonnes per trip will subject the roadway to about 2.25 times as much stress as will a five-axle semi carrying 21 tonnes per trip.

In the mid-seventies, the Canada Grains Council undertook some extensive work in west-central Saskatchewan to assess the impact of rail line abandonment on roads in that region. The conclusion of the analysis was that for municipal and farm access roads, most of the change in truck movements was directional according to the particular configuration of the lines rather than in volume. Another conclusion of this study was that the use of commercial trucks would reduce road maintenance costs, since farm trucks tended to be overloaded relative to tire equipment.

The GHTC concluded that the degree of centralization expected to result from changes in collection point spacing will not result in significant increases in traffic on major road links. Increased grain truck traffic on oil surface roads was a concern, and the GHTC report suggested that some oil surface roads would require upgrading.[18]

18 Grain Handling and Transportation Commission, Grain and Rail inWestern Canada, Volume I, Department of Supply and Services, Ottawa, 1977, pp. 514.

The Prairie Rail Action Committee (PRAC) concluded in its report that abandonment of rail lines will not have a major impact on prairie roads. Road by road, the tonnages are small, and the added tonne kilometres to the system in the absence of a branch line are hardly significant. However, to minimize the impact on the road system, the committee recommended a level of assistance commensurate with the best estimates of added road costs caused by abandonment decisions.[19]

No road capacity problem is anticipated if uneconomical lines are abandoned. However, in a few soft areas there could be some impact on road structure. Farm access roads are unaffected; they will be used then as they are now, no more and no less. There is no evidence of adverse effect on provincial main highways. Any effects are likely to be most noticeable on secondary roads, but even here studies have shown more change in direction of haul than net new tonnage.

Studies have shown that there are tremendous savings over branch line costs if grain is moved marginally further on roads. When governments demonstrate an interest in true economics by cooperating in achieving system efficiency real savings will be possible.

Several studies have emphasized that when cheaper alternatives are available, the choice of a higher cost option is evidence of inefficiency. The PRAC recognized in its report that the continued use of the wide spread high cost rail branch line collection system imposes (regardless of who pays it) an element of unnecessary cost upon the system which lessens Canadian competitive capability. In 1960, the three prairie wheat pools publicly recognized the inefficiency of light density branch lines.[20] In their joint submission to the (MacPherson) Royal Commission on transportation, the brief said:

> Overall . . . it is estimated that the full costs per net ton-mile on a light density line are four times as great as on a heavy density line.[21]

Trucking as an Option to Branch Lines

In its branch line inquiry report, the Canadian Transport Commission (CTC) recommended opening up the existing rail system to competition from other transportation services. The Commission found that the greatest potential for trucking is on lines that are high cost and where incremental trucking costs are relatively low or insignificant. The Commission also concluded that off-line elevator trucking is substantially cheaper than conventional branch line or short line rail transportation operations.[22]

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19 Prairie Rail Action Committee, "Prairie Rail Action Committee Report", Regina, Saskatchewan, 1978, pp.23.

20 Ibid. pp.25.

21 "The Problems of the Canadian Railways", Vol.I, pp.74. by W.B. Saunders and Co., Washington, D.C. 1960.

22 "Report of the Inquiry into Railway Branch Lines", Canadian Transport Commission, Western Division, Saskatoon, Saskatchewan, June, 1985A report published by Administrative Constraints to System Efficiency (A.C.S.E.)

Some grain producers on the prairies truck their product, or have their product trucked to the railway main line or secondary rail line for furtherance to its destination, even though the distance to a local branch line is shorter, or even though they employ the branch line for part of their transportation needs. For various reasons, others elect to employ the local branch line exclusively.

Both CP and CN support trucking as an efficient alternative to branch lines. CN, in its submission, expressed the opinion that there are potential transportation cost savings from extended producer trucking in specific cases, with the advantage of avoidance of high cost, low density branch lines involving short grain pick-up trains, shorter rail hauls, and lower cost, larger primary elevators with larger car spots and more frequent car allocations. The trucking should be flexible and simple, wait-times at elevators would be reduced and probable savings for many branch lines would be realized. Commercial trucking from farms would beattractive for longer distances (in excess of 40-80 kilometres) as costs would be lower per tonne/kilometre. It would lessen demand on producers' time and increase equipment utilization. Farm trucking for short and medium hauls could also improve the efficiency and effectiveness of the grain collection and handling system.

The Working Group for the Senior Grain Transportation Committee found that retention of high cost branch lines cost farmers and the federal government millions of dollars. The resultant savings from retention of such lines to farmers, municipalities and the province are only in the hundreds of thousands.[23]

Farm trucking costs were arrived at by using a marginal costing approach, i.e., farm trucking costs under each scenario show how much additional trucking costs the grain producer would incur. The same thing applies to road maintenance costs, i.e., the cost is the additional cost that would be incurred by municipalities and the province for road maintenance caused by the additional traffic.

Table 6 is based on several assumptions presented in Appendices 1 and 2 of the report. However, the authors emphasize that assumptions were generally chosen so as to diminish the differences between the "abandon" option (#2) and the others. The total system savings from abandonment are therefore likely greater than illustrated in the example.

The study presents further analysis of cost increases and decreases borne by various groups in Tables 7 and 8.[24] In Table 7 a comparison has been made to determine who gains and who loses in each change. Alternatives 2 to 5 have been compared to Alternative 1, i.e., to the "status quo".

In Table 8 a comparison is made between the least cost alternative (#2, complete abandonment) and the others. This comparison identifies who gains and who loses, and by how much, by maintaining service for producers on the line.

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23 "High Cost Branch Line Study, Final Report," A Proposal for Reducing Producers' and System Cost by Dealing with High Cost Branch Lines; Prepared by Administrative Constraints to System Efficiency (A.C.S.E.) Work Group of the Efficiency Measures Subcommittee of the Senior Grain Transportation Committee, Winnipeg, Manitoba, September 1985.

24 Ibid.

TABLE 6

ANNUAL COST OF MOVING GRAIN ORIGNATING ON "Example" BRANCH LINE

	Scenario				
	1. Retain As Is	2. Complete Abandonment	3. Upgrade	4. Abandonment	5. Off-Track Elevators
			$'000		
Cost:					
Farm Truck (Marginal)	-	293.2	102.5	206.9	102.5
Primary Elevation	854.9[1]	988.2[2]	968.1	950.8	968.1
Commercial Trucking	-	-	-	-	242.1
Transloading	-	-	-	-	216.8
Rail	5,184.3	2,786.4	9,568.0	4,350.9	3,039.4
Road Maintenance	-	102.5	49.4	90.4	60.6
Total	$6,032.5	$4,170.3	$10,688.0	$5,559.0	$4,629.5
$/tonne	$44.11	$30.46	$78.07	$40.90	$33.82

(1) Due to the uncertainty surrounding the line, capital investment in the elevators on the line has been abnormally low. Accordingly, this elevation cost reflects very low investment levels.

(2) This elevation cost is the highest because under this scenario the greatest amount of long-term investment is made.

TABLE 7

COMPARISON OF "STATUS QUO" TO FOUR ALTERNATE SCENARIOS

(Shows benefits and costs, and to whom accruing, or changes to existing situation)

	Cost Differences from Alternative #2 ($'000)			
	Alt. #2 Abandon	Alt. #3 Upgrade	Alt. #4 Part. Abandon	Alt. #5 Off-Track
COST DECREASES (BENEFITS)			$'000	
Realized by:				
- Producers Generally[5]	2,397.9[1]	0	833.9[1]	1,686.0[4]
TOTAL	2,397.9	0	833.9	1,686.0
COST INCREASES				
Borne by:				
-Local Producers (Truck Cost)	293.2	102.5	206.9	102.5
-Producers Generally (Elevation Costs)	133.3[2]	4496.9[3]	95.9[2]	113.3[2]
-Municipalities (Road Cost)	102.5	49.5	90.4	60.5
TOTAL	529.0	4,648.9	393.2	276.3
NET BENEFITS				
(a) Total	1,868.9	($4,648.9)	$440.7	$1,409.7
(b) Per Tonne	$13.65	($33.96)	$3.22	$10.3

Notes:
(1) Rail savings only.
(2) Primary elevation costs borne by grain producers only.
(3) Includes $4,383.7 thousand increased rail costs, plus $113.2 thousand primary elevation costs (borne by grain producers only).
(4) Includes $2,144.9 thousand rail savings less $242.1 thousand commercial truck costs costs and $216.8 thousand transloading costs.
(5) Rail cost increases and decreases are assigned to producers generally on the premise that inflation for the next five years is in the 0-6% range. If inflation is zero, or is above this range, the federal government will share them.

TABLE 8

COMPARISON OF VARIOUS ALTERNATIVES TO THE LEAST COST SCENARIO (TOTAL ABANDONMENT)

(Illustrates the cost and benefits, and whom accruing, of maintaining service in the area by retention, particial retention and off-track elevators)

	Alt. #2 Retention "as is"	Cost Differences from Alternative #2 ($'000) Alt. #3 Retnetion w/upgrading	Alt. #4 Partial Retention	Alt.#5 Off-Track
COST INCREASES				
Realized by:			$'000	
- Producers Generally[5]	2,397.9[1]	6,781.6[1]	1,564.3[1]	711.2[3]
TOTAL	2,397.9	6,781.6	1,564.3	711.2
COST DECREASES (BENFITS				
Borne by:				
- Local Producers (Truck Cost)	293.2	191.0	86.3	190.7
- Producers Generally (Elevation costs)	133.3[2]	20.1[2]	37.4[2]	20.1[2]
- Municipalities (Road Cost)[4]	102.5	53.0	12.1	42.0
TOTAL	529.0	264.1	135.8	252.8
NET BENEFITS				
(a) Total	1,868.9	($6,517.5)	$1,428.5	$458.4
(b) Per Tonne	$13.65	($47.61)	$10.43	$3.35

Notes:
(1) Rail savings only.costs borne by grain producers only.
(2) Primary elevation costs borne by grain producers only.
(3) Includes $253.0 thousand rail costs plus $242.1 thousand commercial trucking costs plus $216.1 thousand transloading cost.
(4) Some road costs accrue to the province.
(5) Rail costs increases and decreases are assigned to producers generally on the premise that inflation for the next five years is in the 0-6% range. If inflation is zero, or is above this range, the federal government will share them.

SECTION V

PROSPECTS FOR COMMERCIAL TRUCKING TO TRANSPORT GRAIN TO PORT TERMINALS

Highway transport is well suited to the movement of truckload quantities over relatively short distances. Although development of fuel efficient and bigger trucks (A-trains, B-trains and C-trains) has revolutionized the trucking industry and increased its share of the overall traffic, it is not economical for trucks to handle bulk commodities like grain over long hauls. Research has shown that trucks are more efficient on short and medium hauls (up to 800 kilometres) than railroads. However, for longer hauls, (over 800 kilometres) particularly for bulk commodities, railways are more efficient and economical. Railways are most efficient when producing mass tonne/kilometres. The success of the unit train for moving bulk commodities demonstrates success of the system.

Use of Truck Versus Train for Hauling Grain to Ports

Carrying capacity

It has been mentioned occasionally that commercial trucks can compete effectively with the railways to haul grain to the ports. A few years ago, Alberta Wheat Pool used commercial trucks to haul rapeseed to Vancouver owing to the non-availability of rail cars to meet commitments with foreign buyers. Rates paid by the Pool to commercial truckers were kept confidential.

For example, a train consisting of 80 hopper cars can carry approximately 6,000 tonnes of grains (average of 75t/car) thus generating 6,000 tonne-kilometres for every kilometre it operates. It would take 240, 5-axle tractor/semi-trailer combinations, fully loaded, to generate an equivalent number of tonne-kilometres (25t/trailer) or over 165, 7-axle A-trains or 8-axle B-trains to generate an equivalent number of tonne-kilometres. This example shows that each mode has a function to perform. It takes many truckloads to make a train load, therefore it is not feasible to use trucks for hauling grain longer distances. (over 800 kilometres) especially when large volumes are involved.

Cost effectiveness

Under the provisions of the WGTA for rate increases, the shipper is expected to pay an increasing proportion of rail rates in the future. It has been mentioned by a few groups that if the method of Crow benefit payment were redirected to producers, they might consider using commercial/custom trucks to move grain directly to ports rather than going through the primary elevator system and by rail, thus avoiding elevation charges at primary elevators. As mentioned above, with few exceptions, hardly any grain moves from Alberta directly to the ports using commercial trucks. The possibility of using commercial trucks to move large quantities of grain to ports appears remote during the foreseeable future, primarily because of the costs. Terminal elevators located at the ports charge the same elevation fee for grain arriving by truck as that coming by rail from a primary elevator. Therefore, the cost incentive is not there for using commercial trucks for hauling grain to ports. Moreover, truck rates for front haul are significantly higher than the current rail costs (Table 9).

TABLE 9

Comparison of Statutory Rail Rates and Truck Rates on Grain To Vancouver

From	To	Jan./86 Truck Rate (1)	1985/86 Rail Costs (2)	1985/86 Shipper Share	Differential (1-2)
			$ per tonne		
Edmonton	Vancouver	40.18	25.26	5.41	14.92
Calgary	Vancouver	33.13	25.26	5.41	7.87
Lethbridge	Vancouver	44.17	27.57	5.90	16.60
Medicine Hat	Vancouver	47.54	31.27	6.69	16.27

Source: 1. Western Tariff Bureau, Tariff No. 875, Section 2.
2. Published Rail Costs.

A comparison of rates shows that front-haul truck rates are about 34 to 37 per cent higher than rail costs, except for the Calgary area where truck rates are higher by just over 23 per cent. Commercial carriers would have to reduce these rates by more than 40 per cent to attract grain for delivery to ports. Slashing rates to such an extent would not be economically feasible. Therefore, it appears that there is no apparent incentive for shippers to employ commercial trucks for delivering grain to ports.

The back-haul rates hardly cover operating costs of trucks, therefore it does not make economic sense to under utilize equipment. Back-haul rates from Calgary and Edmonton to Vancouver have been quoted as $28.65 and $30.42 per tonne, respectively. It could be argued that with these back-haul rates, grain hauling to ports appears feasible. However, such rate incentives are not enough to induce shippers to completely change their shipping habits. Hauling grain directly from farms in Alberta to ports would have some additional costs over the back-haul rates and would require massive changes in the grain handling and transportation system. Large capital investments in railway equipment and primary elevators would not permit development of commercial trucking under the existing situation.

The information presented above shows that commercial trucks are less cost-effective compared to railways for hauling grain to ports. Furthermore, the total volume of grain being shipped to ports is so large that it is not possible to substitute trucks for rail. Trucks can be used for scattered shipments as has been done in the past. Even a change in the method of Crow benefit payment, i.e, paying producers, would not encourage trucking of grain to ports.

A few carriers have indicated an interest in hauling grain to ports at back-haul rates which are about 25 to 30 per cent lower than the front-haul rates presented in Table 9.

It was indicated in Objective 2 of this study that trucking may not be feasible to replace rail for long hauls, but may serve as a "feeder" to expedite rail traffic and efficient use of rail equipment.

A feeder role for trucking is presented in Figure 5.[25] Trains are misused when they are employed to collect railcars of grain two and three at a time along a subdivision and haul these to an assembly point for marshalling and furtherance. Similarly, the highway mode is misused when it is employed to haul large quantities over long distances.

The IBI study concluded that if there is a back-haul available then trucking rates can be competitive, but only for shorter distances (up to 800 km). Commercial trucking of grain to ports on back-haul rates can only be feasible if the shipper pays a much higher proportion of the rail rate than he does today.[26]

Port facilities

Unloading facilities at ports are more attuned to receiving trains than trucks. Scattered truck loads have been delivered at these facilities during the last few years. But if a large number of trucks are to be used in hauling significant volumes of grain to the existing port facilities, this would lead to congestion and would require massive renovations to accommodate an increased number of trucks.

As mentioned above, the trucking of grain to ports does not appear to be feasible because of the large volumes to be shipped, the high cost of trucking, safety of highway traffic, and the design of grain receiving facilities at ports. However, trucking can play an important role as a "feeder" in complementing railway equipment to expedite grain shipments, improve car turnaround time, and make best use of available railway equipment.

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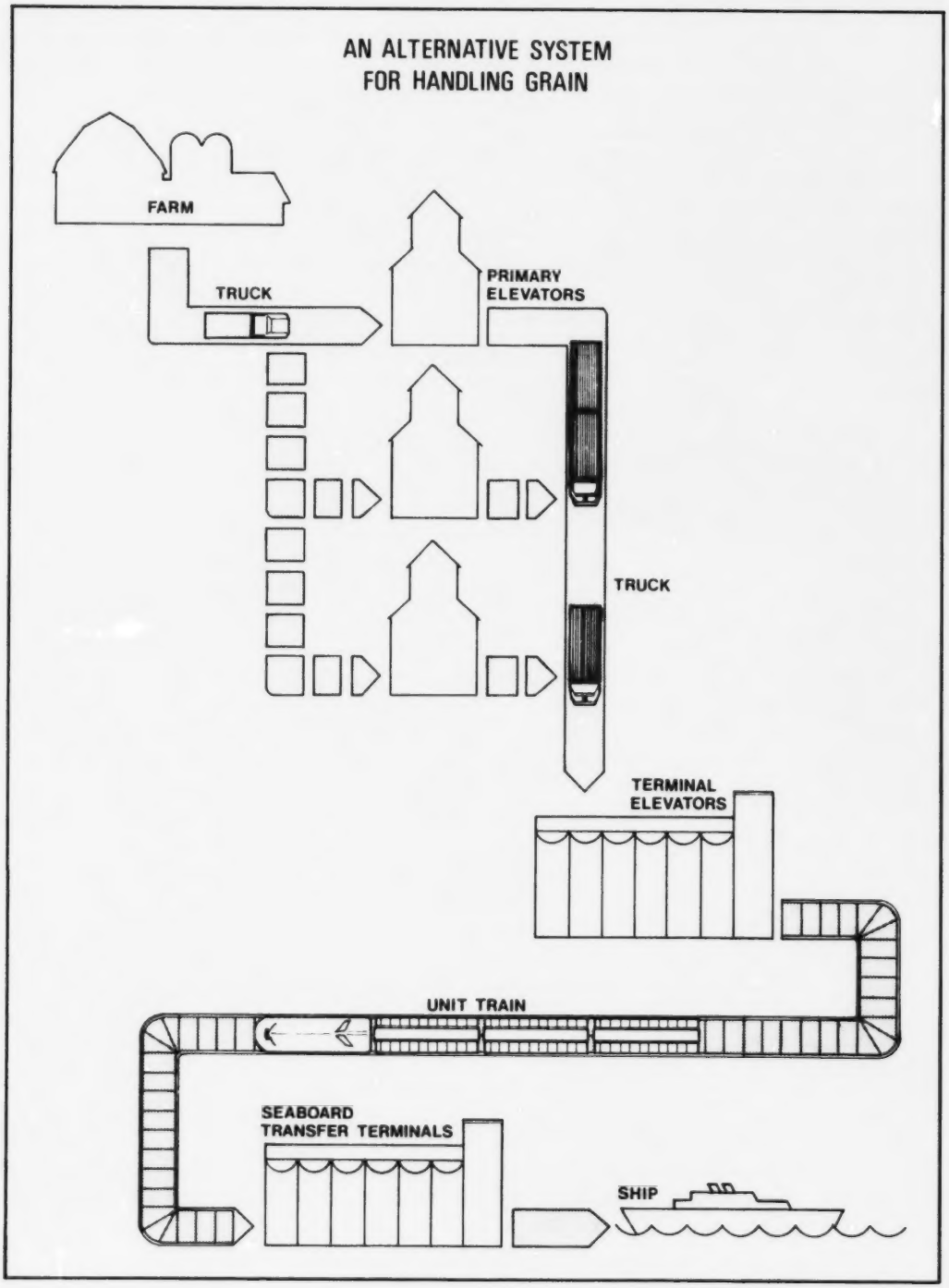
25 "Feasibility of Alternate Means of Grain Handling and Transportation in the Peace River Region of Alberta", Deloitte Haskins & Sells Associates and Stanley C.D. Howe Associates, February 1980.

26 IBI study, Op.cit., pp. 103.

FIGURE 5


AN ALTERNATIVE SYSTEM
FOR HANDLING GRAIN
FARM
TRUCK
PRIMARY
ELEVATORS
TRUCK
TERMINAL
ELEVATORS
UNIT TRAIN
SEABOARD
TRANSFER TERMINALS
SHIP

SECTION VI

SUMMARY

Trucking has played an important role in the development of the grain industry on the prairies. The number of farm and commercial trucks has increased significantly during the seventies and early eighties. Trucks have replaced railways on short-haul traffic and have captured a significant portion of the medium to long-haul movements of grain and grain products for the domestic market. The rationalization of primary elevators and abandonment of uneconomic branch lines have increased the role of trucking in the grain industry. Intra-provincial movement of grains from the farm to various market outlets (primary elevators, feedmills, feedlots, flour mills, processors, etc.) is about 90-92 per cent by farm truck, and the balance (8-10 per cent) is by commerical/ custom trucks. The inter-provincial movement of grain and grain products is by commercial trucks and railways.

The process initiated by the federal government to reform the statutory rates in the eighties has overlooked the role of trucking in the grain handling and transportation system. Trucking, which is an integral part of grain movement, was not considered during the policy development process.

This report is an extension of an earlier report, published in 1985, which documented trucking activity (commercial and farm) for intra- and inter-provincial movement of grain and grain products. The earlier report also discussed the future role of trucking for hauling grain and grain products, and the attainable efficiencies in the grain handling and transportation system.

This study (Phase II) was undertaken to determine the future role of trucking for grain transportation under the scenarios of paying the Crow benefit to:

- the railways
- the producers

Another objective of the study was to determine the future role and prospects for commercial trucking to transport grain to export positions under the new statutory rates.

Changes in the Grain Handling and Transportation System

The performance of the grain handling and transportation system during the last two decades suggests that initiatives are required to make the system more effective and cost-efficient. In February 1982, the federal government appointed a task force to develop some consensus, in consultation with the parties affected, to resolve the issue of Statutory rates. The consultation process provided an opportunity for the parties involved to express their concern regarding the future direction of the grain handling and transportation system. The parties involved could not agree on all aspects of resolving the Statutory rates issue. However, they provided a general consensus on a number of broad issues, which formed the basis for parts of Bill C-155 (Western Grain Transportation Act).

The Western Grain Transportation Act (WGTA) was proclaimed as law and became effective on January 1, 1984 with a few transitional provisions for the 1983-84 crop year. Because of the lack of consensus on the method of benefit payment, the federal government

decided to pay the entire Crow benefit to railways instead of splitting it between the railways and producers as recommended by Dr. Gilson, who completed the report on the consultation process.

In April 1984, the government appointed a committee to study the method of Crow benefit payment and provide recommendations. The committee submitted its findings in March 1985, and recommended that a grain transportation refund (GTR) be paid directly to producers in the Canadian Wheat Board (CWB) designated area on the basis of net sales of eligible grains in each crop year. The refund would consist of the 1981-82 fund of $658.6 million, made up of government contributions through the inflation protection and safety net provisions of the WGTA.

The federal government did not act on the committee's recommendations and asked the Grain Transportation Agency (GTA) to review the committee's recommendations along with a review of the Act. The WGTA has provisions for review of the Act every four years. The GTA report was submitted to the federal government in June 1986. The report contains 45 recommendations on the changes to the WGTA. On the contentious issue of Crow benefit payment, the GTA has recommended that the federal government proceed with paying out its Crow benefit commitment in full, while maintaining the Statutory freight rate and maintaining and strengthening the inflation sharing and safety net provisions of the legislation. This would mean paying producers a sum sufficient to provide them, in future, with income equivalent to what they would have received under the subsidy.

Impact of Crow Benefit Payment on Trucking

The two specific decisions under the WGTA which affected the trucking industry are:

- the addition of speciality crops to the list of crops that move by rail at the statutory rates, and
- the decision to pay the Crow benefit to the railways.

Trucking industry representatives strongly feel that the WGTA did not have a positive impact on their industry. Payment of the Crow benefit to the railways coupled with lower grain production in 1984 and 1985 has squeezed most carriers out of grain hauling. During the 1983-84 crop year over 10 million tonnes of grain were delivered to primary elevators in Alberta by farm and commercial trucks. About one million tonnes were transported by commercial/custom truckers, mostly commercial, resulting in about 50,000 truckloads. Truckers feel that their share of the traffic could double if the Crow benefit were paid to producers.

The number of carriers hauling grain and grain products both intra- and inter-provincially has dropped considerably. One carrier estimated that the number of grain trailers in the province has decreased to about 230 from a high of over 400 in 1974-75. For a large number of carriers grain hauling, which used to be front-haul traffic, has become back-haul, which means there is considerable reduction in income.

Some carriers who specialized in hauling grain and feed grains were forced to merge with other carriers because of a lack of grain traffic, or had to change operation, i.e., haul commodities other than grain. Others have sold their equipment. Participation by commercial carriers in the grain handling and transportation system has been decreased considerably because of the pay-the-railway option and the addition of specialty crops to the statutory crops list.

The pay-the-railways feature of the WGTA rejects the principle of equal treatment as set out in the preamble of the National Transportation Act.

Opportunities for inter-modal competition in grain handling and a reduction in transportation costs have been lost by paying the Crow benefit to railways. At present, existing trucking capacity is greatly under utilized, which has negative impact on the industry. Commercial trucking of grain within the province has decreased considerably compared to the 1970's. Inter-provincial movement of grain has also dropped because of the lower rates offered by the railways.

The WGTA has discouraged development of a cost-effective and efficient grain handling and transportation system. Most carriers feel that their industry's future is bleak unless the method of payment is changed in favor of producers. At the start of the reform process truckers were looking forward to participating in the grain handling and transportation system, but federal policies have eroded their minimal participation.

Trucking of Grain to Port Terminals

Commercial trucking for transporting grain to port terminals was not considered possible until the late seventies. On a few occasions, grain companies have used commercial trucks to haul rapeseed and other specialty crops to ports in order to meet contract commitments with foreign buyers. Trucks have been used to deliver scattered shipments of high value grain when railway equipment was not available to undertake such shipments.

Although the development of heavier, fuel efficient trucks and changes in maximum weight limitations have prompted the trucking industry to compete with the railways on short and medium hauls, trucks cannot compete with railways for hauling grain to port terminals. The large volumes of grain shipments to ports and the longer distances involved do not permit the trucking industry to compete with railways. Trucking of grain to port terminals does not appear to be a cost-effective and feasible method. Furthermore, grain receiving facilities at ports discourage long lines of commercial trucks, i.e., A-trains, B-trains or C-trains, and are not designed to receive trucks. If trucks are to be used for delivering grain to ports, the facilities would require massive renovations, as they were built to receive rail cars only.

Experience has shown that trucks can play an important role in the grain handling and transportation system by complementing the railways. As railway equipment become obsolete and funding is reduced for replacement, the role of trucks in grain hauling will become more prominent. If the Crow benefit is paid to producers the use of trucks for hauling grain for intra- and inter-provincial movements will certainly increase, but not to export positions (ports) as suggested by some groups in the grain industry.

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